How to setup a serial Bluetooth adapter

Master Guide

This guide is based on Windows 7 and the UCBT232B/EXA Serial Bluetooth adapter.

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Pairing the serial Bluetooth adapter with your computer.

To be able to communicate with the serial Bluetooth adapter you need to first pair it with your computer.
Our serial Bluetooth adapters part UCBT232B and UCBT232EXA can be paired using a Bluetooth management software called BlueSoleil (for Windows XP) or by using Windows Vista, Windows 7 or Windows 8's built-in Bluetooth management software.
We will first describe how to pair it using Windows Vista, 7 or 8.

Pairing with built-in Bluetooth or external USB Bluetooth dongle using Windows default Bluetooth management software (for Windows Vista, 7, 8)

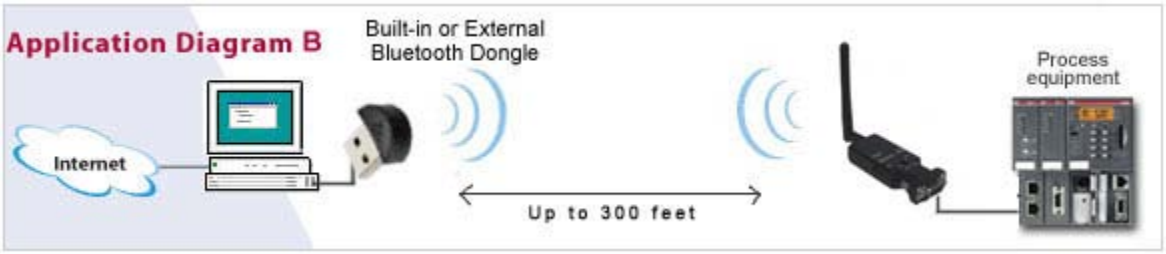
First we identify the products:

Serial Bluetooth adapter (UCBT232B/EXA)

USB Bluetooth adapter type 1

USB Bluetooth dongle type 2

The setup looks like this:



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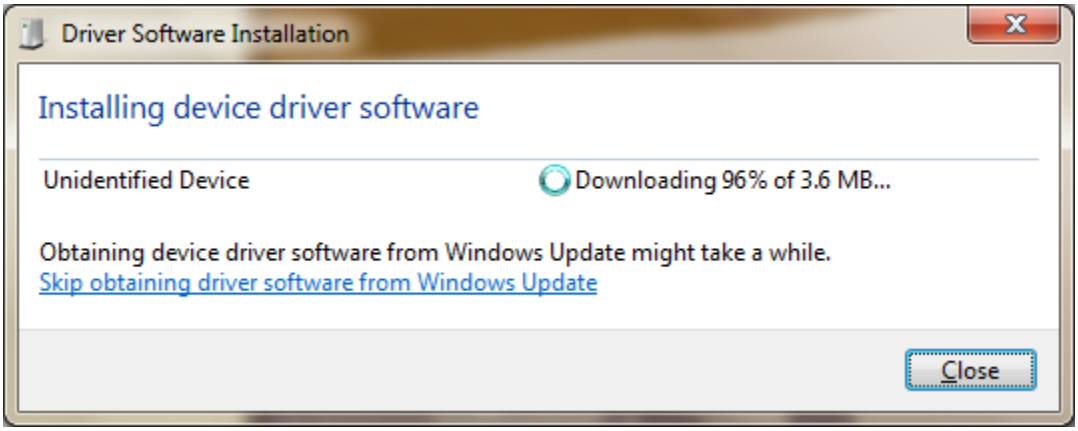
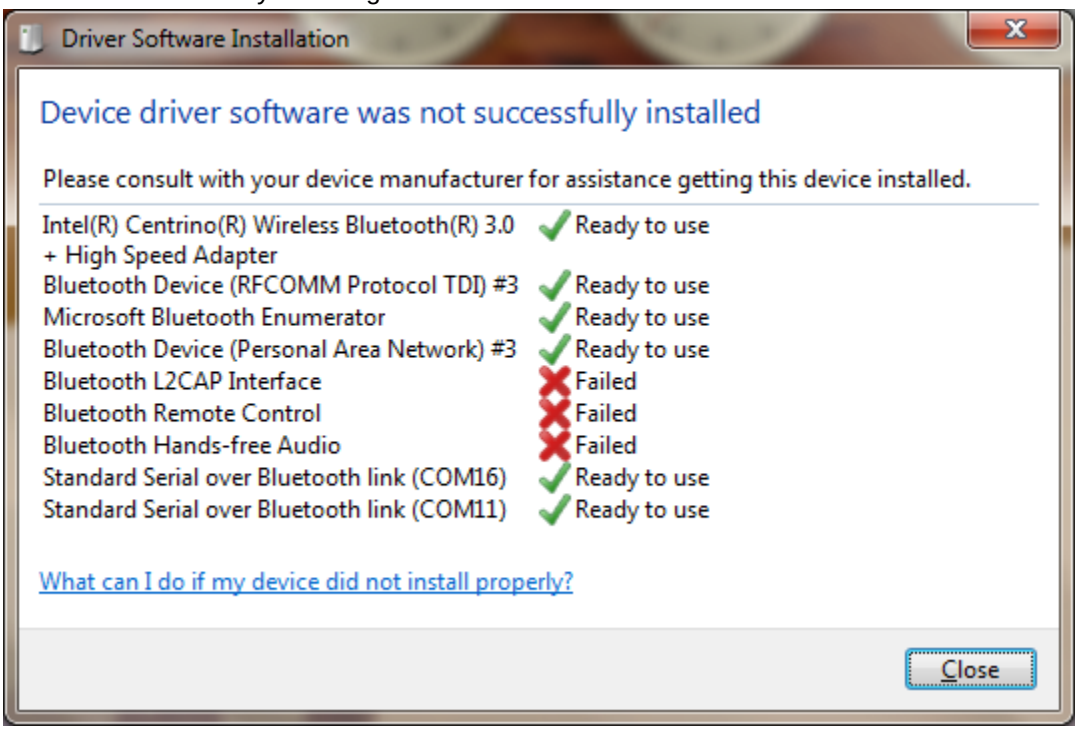
Getting Started

If your computer does not already have built-in Bluetooth, then you can instead use a USB Bluetooth dongle.
Plug-in the dongle to your computer's USB port. Windows should now search for the drivers for the USB Bluetooth dongle, (you may need to be connected to the internet).


Driver Software Installation
Installing device driver software
Unidentified Device
Downloading 96% of 3.6 MB...
Obtaining device driver software from Windows Update might take a while.
Skip obtaining driver software from Windows Update
Close

Windows automatically installing the drivers.


Driver Software Installation
Device driver software was not successfully installed
Please consult with your device manufacturer for assistance getting this device installed.
Intel(R) Centrino(R) Wireless Bluetooth(R) 3.0 + High Speed Adapter
Ready to use
Bluetooth Device (RFCOMM Protocol TDI) #3
Ready to use
Microsoft Bluetooth Enumerator
Ready to use
Bluetooth Device (Personal Area Network) #3
Ready to use
Bluetooth L2CAP Interface
Failed
Bluetooth Remote Control
Failed
Bluetooth Hands-free Audio
Failed
Standard Serial over Bluetooth link (COM16)
Ready to use
Standard Serial over Bluetooth link (COM11)
Ready to use
What can I do if my device did not install properly?
Close

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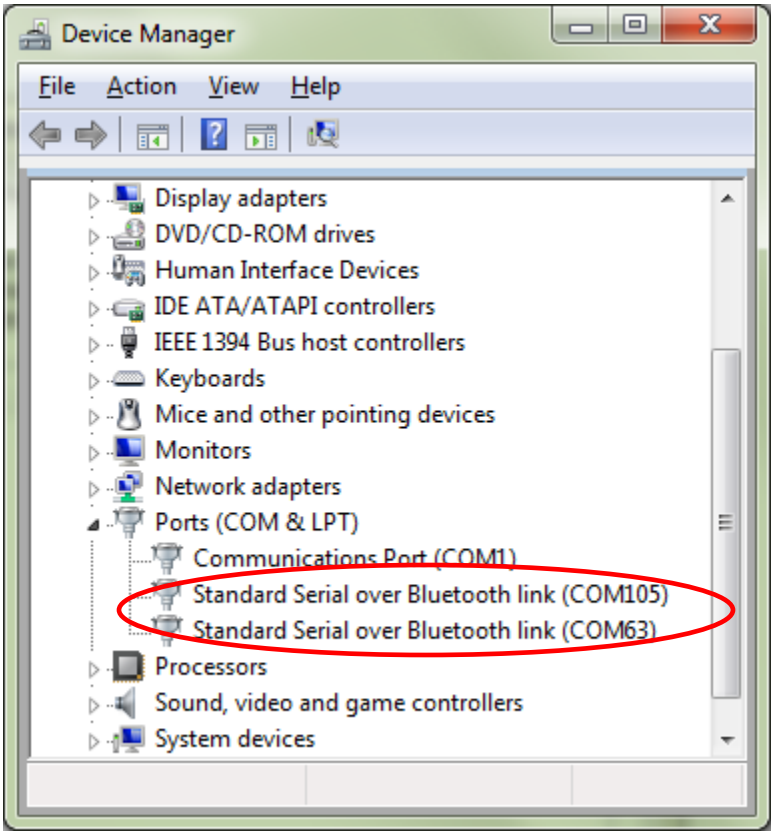
After the installation has finished successfully (there might be some failed control items as shown in the image above, you don't need to worry about this) you will be able to see two COM ports in Windows Device Manager. One is an outgoing port and the other is an incoming port. Both are virtual COM ports created by the Bluetooth drivers and the dongle.



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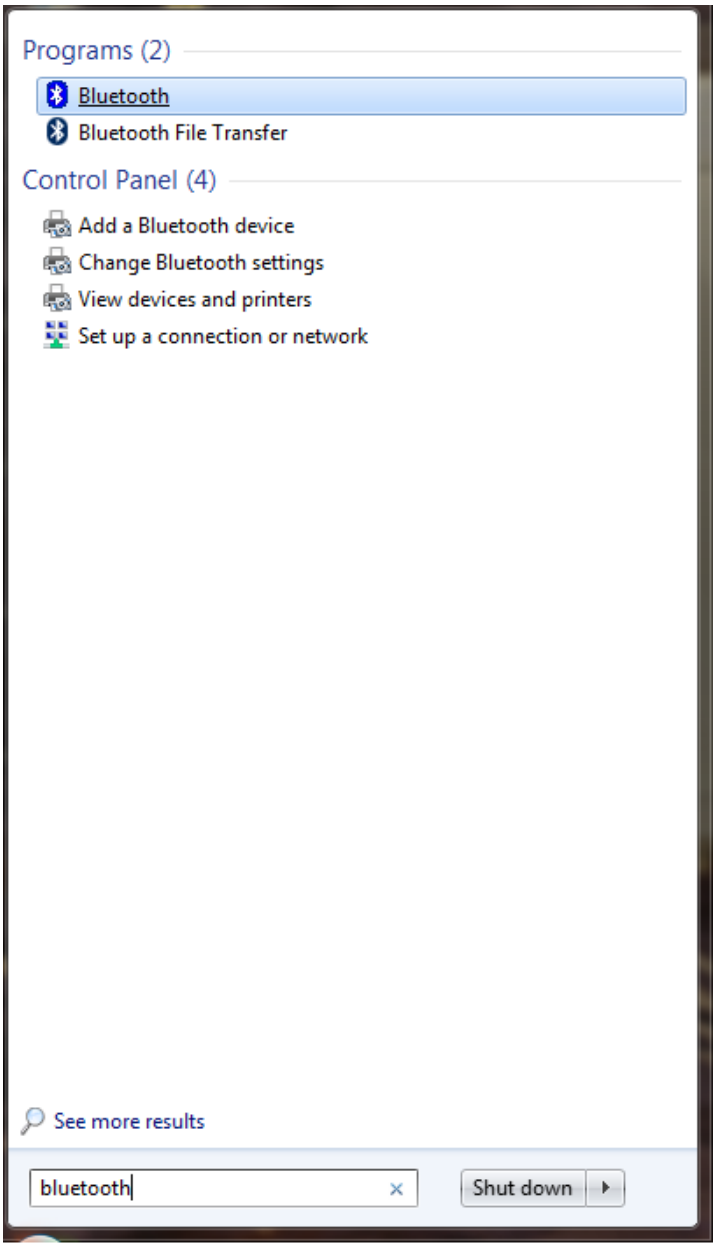
Now you need to pair the serial Bluetooth adapter with the computer via the USB Bluetooth dongle.
Enter the word “Bluetooth” in the start menu and click the Bluetooth link that shows up. This will start Windows default Bluetooth management software (if this has successfully been installed on your computer).



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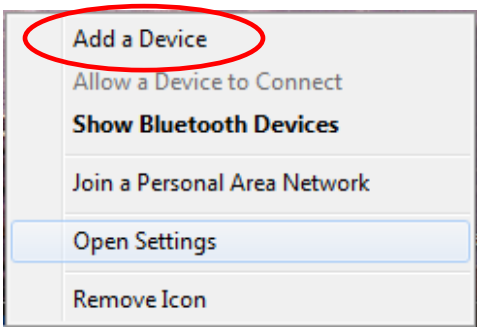
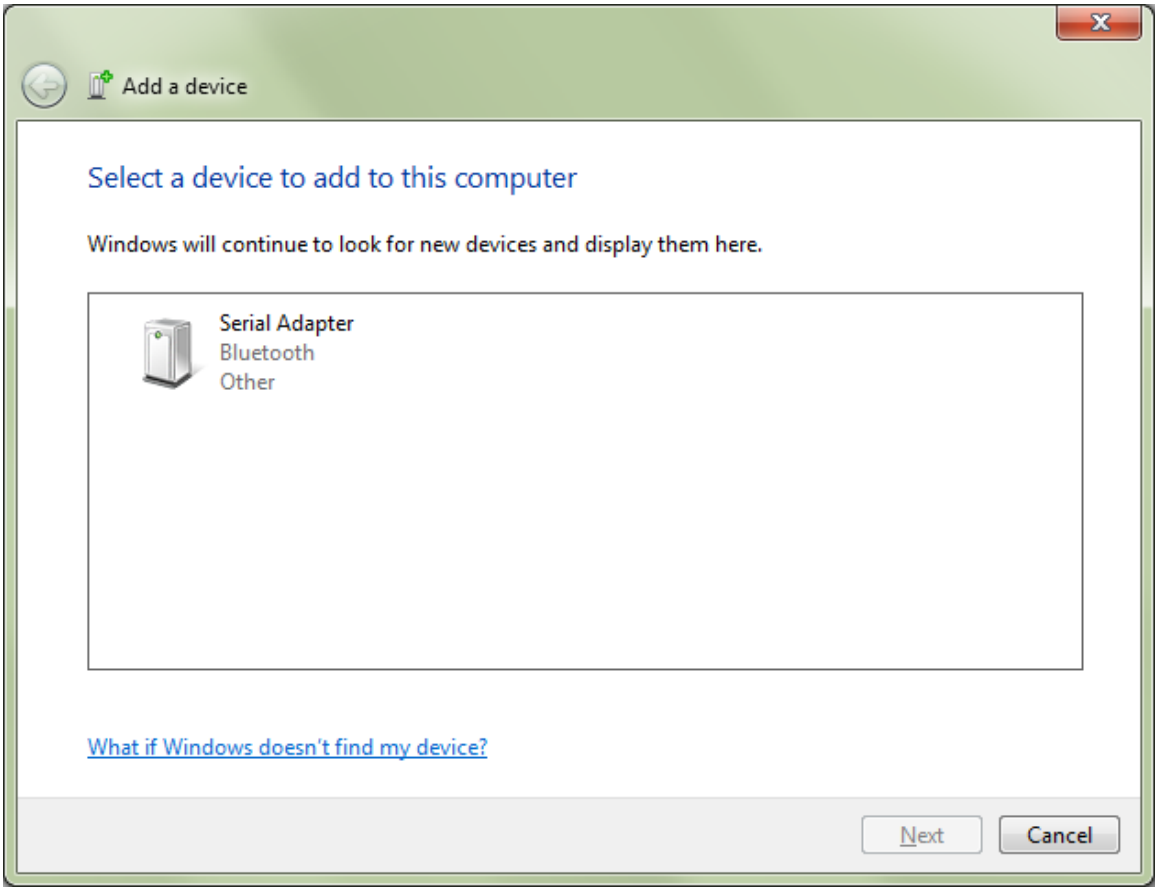
A Bluetooth icon should now appear in the task bar:

Click the Bluetooth icon and click “Add a Device” in the menu:



Windows should now search for the serial Bluetooth adapter and be able to find it:


Add a device
Select a device to add to this computer
Windows will continue to look for new devices and display them here.
Serial Adapter
Bluetooth
Other
What if Windows doesn't find my device?
Next
Cancel

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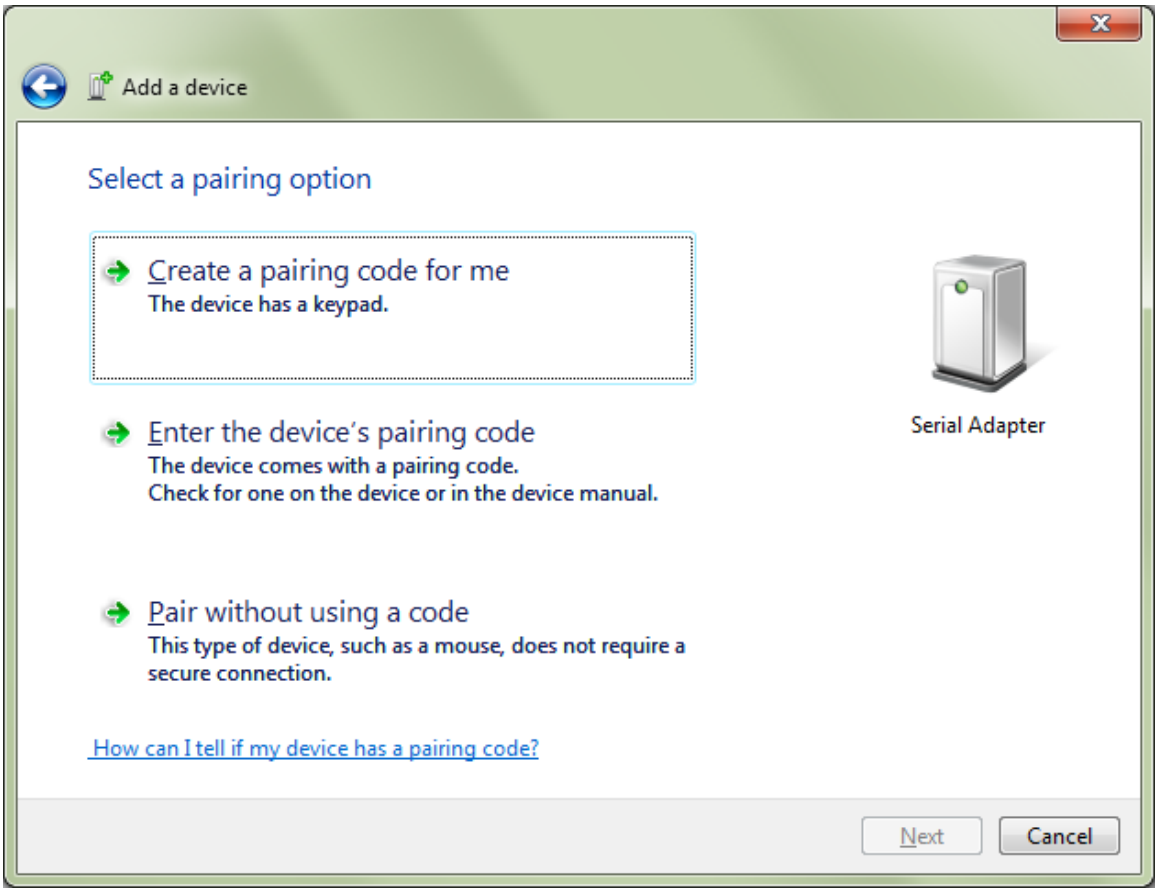
After windows have found the adapter, click “Enter the device pairing code”:


Add a device
Select a pairing option
Create a pairing code for me
The device has a keypad.
Enter the device's pairing code
The device comes with a pairing code.
Check for one on the device or in the device manual.
Pair without using a code
This type of device, such as a mouse, does not require a secure connection.
How can I tell if my device has a pairing code?
Serial Adapter
Next
Cancel

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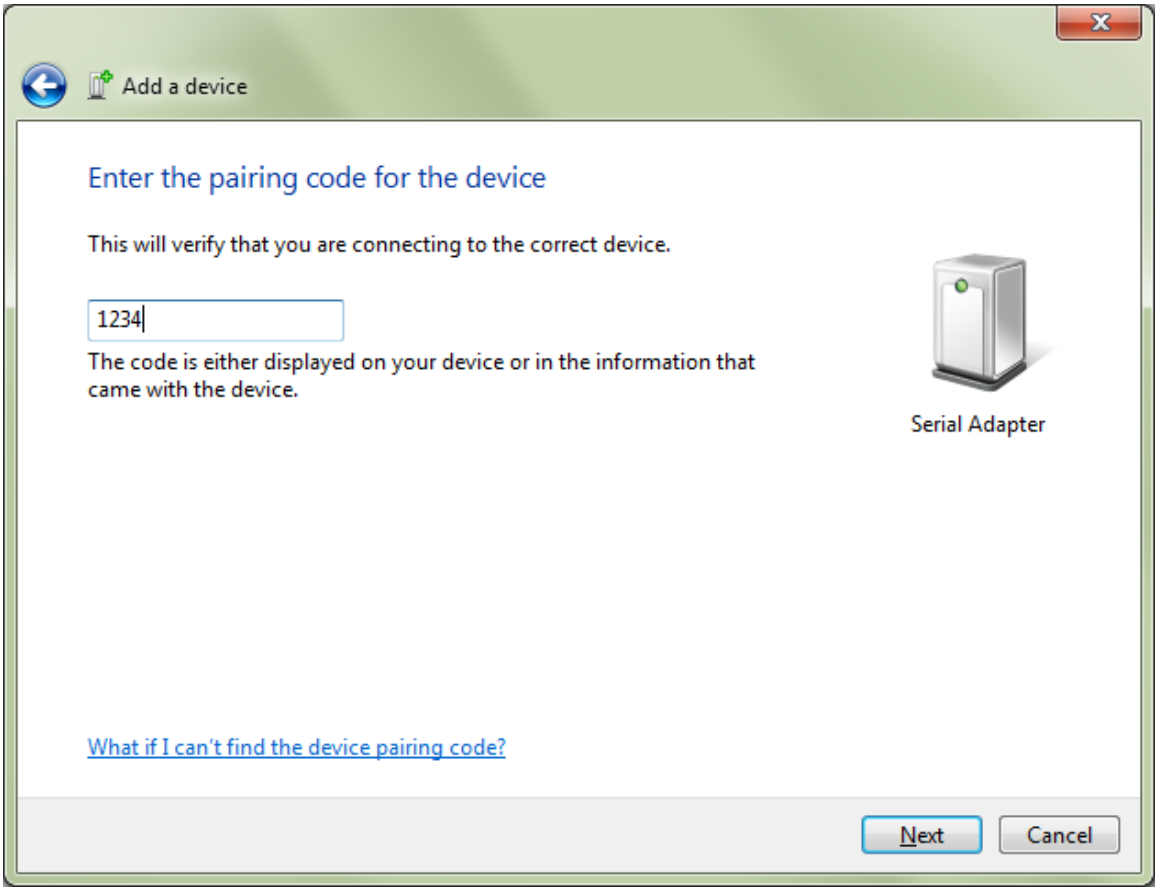
The pairing code is “1234”:


Add a device
Enter the pairing code for the device
This will verify that you are connecting to the correct device.
1234
The code is either displayed on your device or in the information that came with the device.
Serial Adapter
What if I can't find the device pairing code?
Next
Cancel

Click Next

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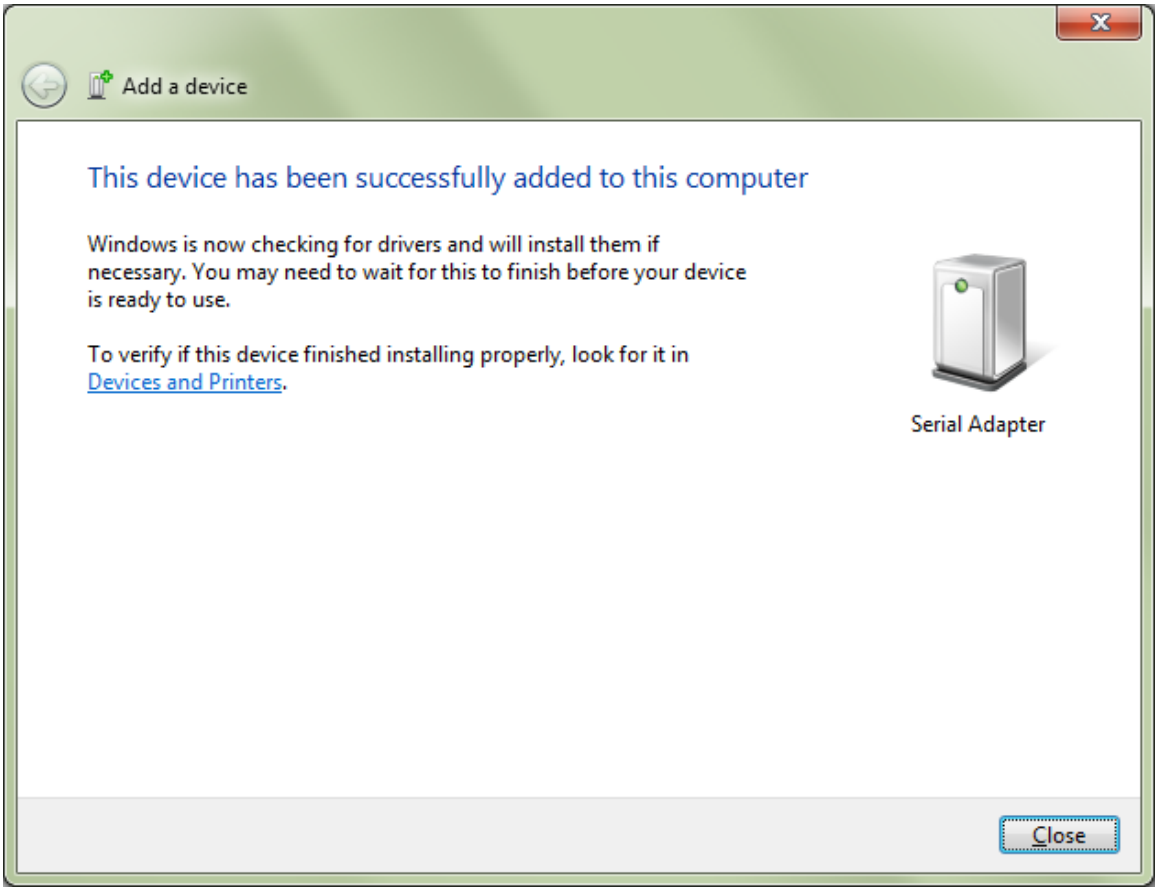
The serial Bluetooth adapter is now successfully installed and paired:


Add a device
This device has been successfully added to this computer
Windows is now checking for drivers and will install them if necessary. You may need to wait for this to finish before your device is ready to use.
To verify if this device finished installing properly, look for it in Devices and Printers.
Serial Adapter
Close

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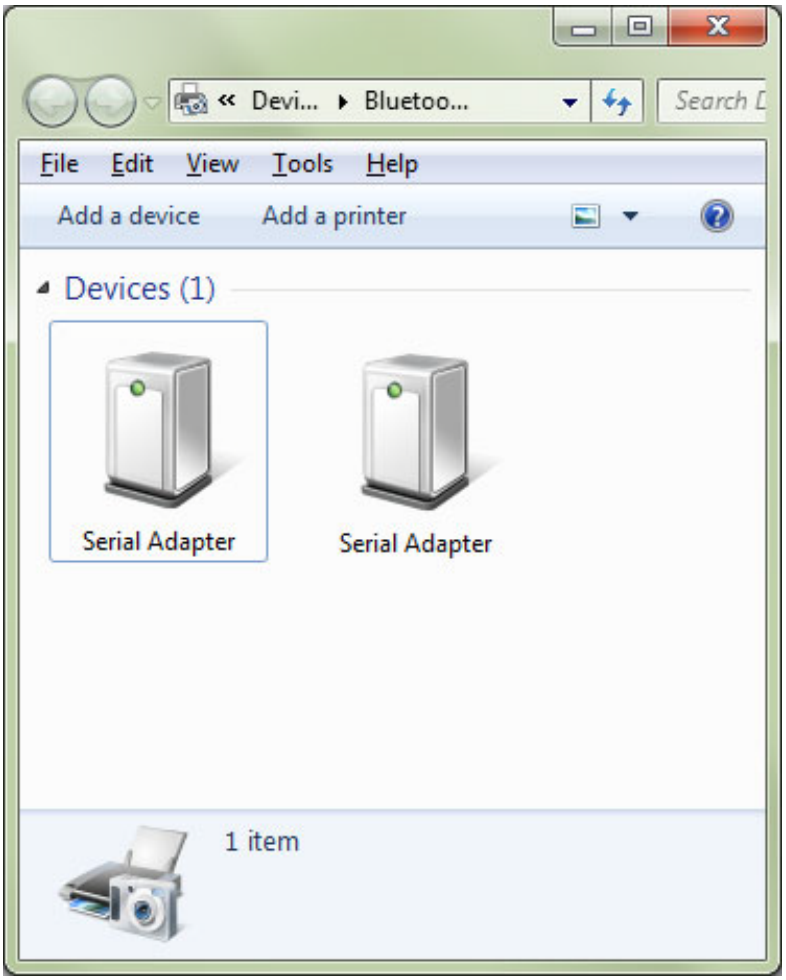
If Windows does NOT find the serial Bluetooth adapter it might be because it has already been found earlier and already exists in the system. In that case you may need to first remove the serial Bluetooth adapter from the system. Click the Bluetooth icon in Windows task bar and chose “Show Bluetooth devices” from the menu:



The image above shows two serial Bluetooth adapters even only one adapter is connected. The reason is that Windows sometimes fails to remove the last adapter which was connected to the computer; you will then need to remove it manually. Right-click the icon and chose “Remove Device” to remove it. Now you can again try to add the serial Bluetooth adapter by clicking the Bluetooth icon in the task bar and chose “Add Device” from the menu.

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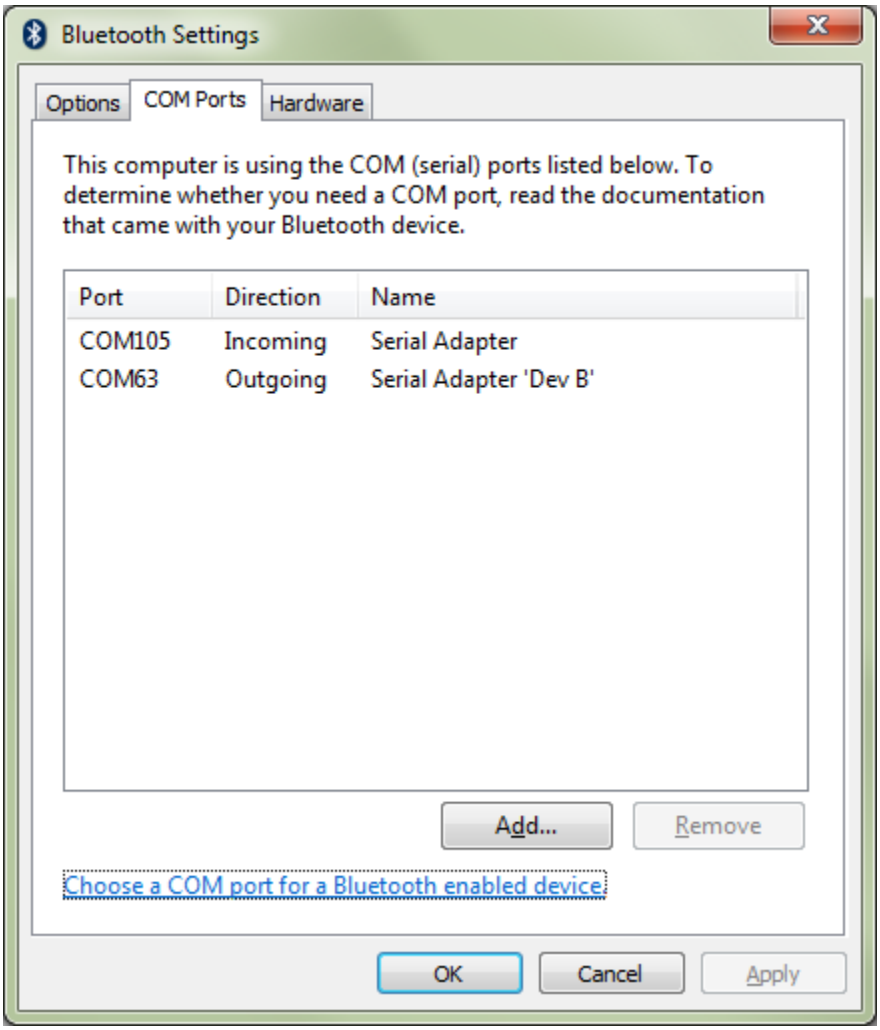
Assuming that the serial Bluetooth adapter has been successfully installed, click the Bluetooth icon in the Windows task bar and chose “Open Settings”. In the Bluetooth settings window you can now see the COM ports for the serial Bluetooth adapter. I this case COM port number 63 and 105 have been assigned by Windows. Windows assigns an ingoing and an outgoing port. To simplify things; COM63 is the main port which we will use for our communication. You do not need to worry about incoming or outgoing ports as long as you identify which port is the main port. The main port in this case for the UCBT232B/EXA is usually indicated as “Serial Adapter ‘Dev B’” as shown below:



COM63 shown above is the USB Bluetooth dongle.
If you wish to change the COM port number from COM63 to for example COM10 then you can do so in Device Manager. Right-click the COM port listed under Ports (COM & LTP) in Device Manager and chose “Properties”. Under the “Port Settings” tab click the “Advanced” button, you can here change several settings including the COM port number.

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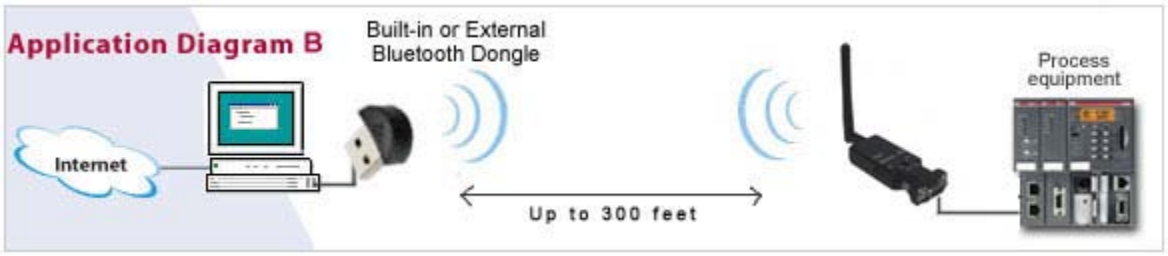
Pairing with built-in Bluetooth or external USB Bluetooth dongle using BlueSoleil (ONLY for Windows XP or older)

1. Download Bluesoleil from www.usconverters.com
2. Install Bluesoleil
3. Start Bluesoleil
4. Insert a USB Bluetooth dongle into your computer's USB port.
   If you computer has built-in Bluetooth skip this step.

5. Connect the UCBT232B/EXA to the power supply, either by a USB power cable or a 110/5V power adapter, and turn it ON. The red LED light on the UCBT232B/EXA should be steady 'ON' and the blue light should be flashing.

The setup should look similar to this



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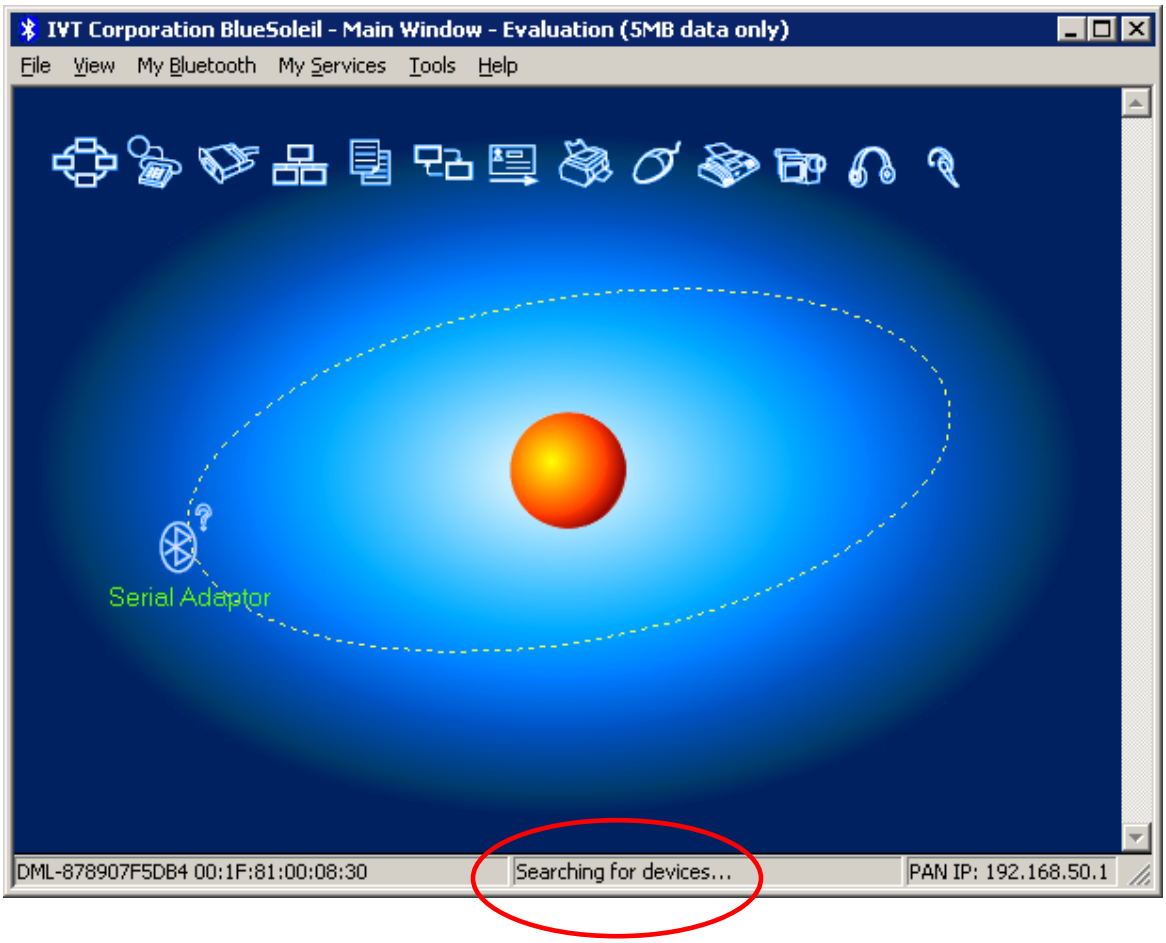
6. To search for devices click on the orange circle in Bluesoleil and the UCBT232B/EXA will be discovered. The lower status line must say “Searching for devices…” when a device search is in progress.


IVT Corporation BlueSoleil - Main Window - Evaluation (5MB data only)
File View My Bluetooth My Services Tools Help
Serial Adaptor
DML-878907F5DB4 00:1F:81:00:08:30
Searching for devices...
PAN IP: 192.168.50.1

If BlueSoleil cannot find or detect the Serial Adapter when you click the orange search button a simple solution can be to use a different USB port for the external USB Bluetooth dongle if you are using this. If this does not help try resetting the UCBT232B/EXA (hold down the reset button for 10 sec with a paper clip while you apply power).

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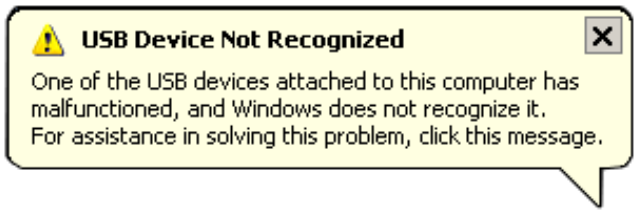
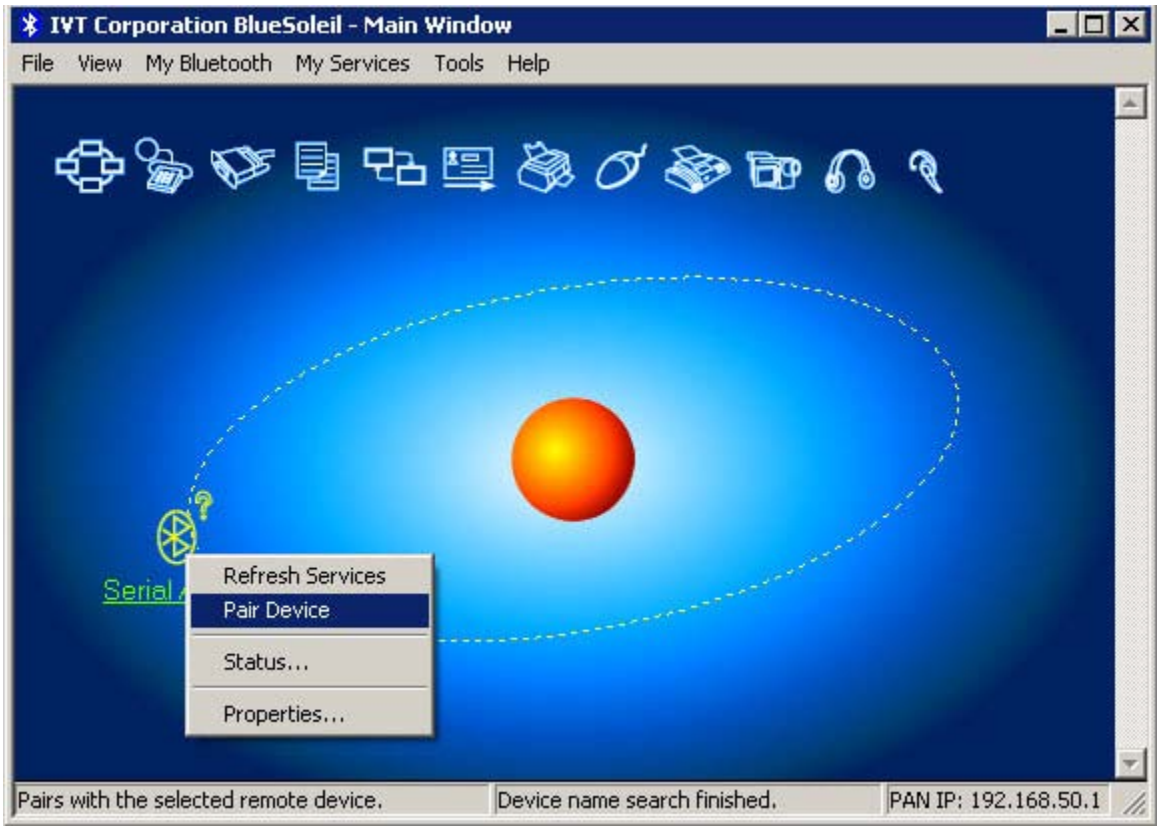
If you are getting a “USB Device Not Recognized” error from Windows when you turn on the UCBT232B/EXA you can simply just ignore this error. The adapter only gets its power from the USB port, no data is transmitted.


USB Device Not Recognized
One of the USB devices attached to this computer has malfunctioned, and Windows does not recognize it.
For assistance in solving this problem, click this message.

7. Right-click on the Serial Adapter icon in Bluesoleil and click ‘Pair Device’



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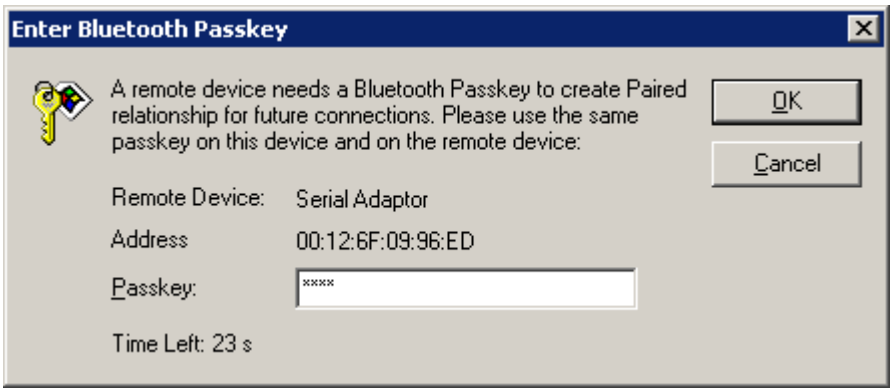
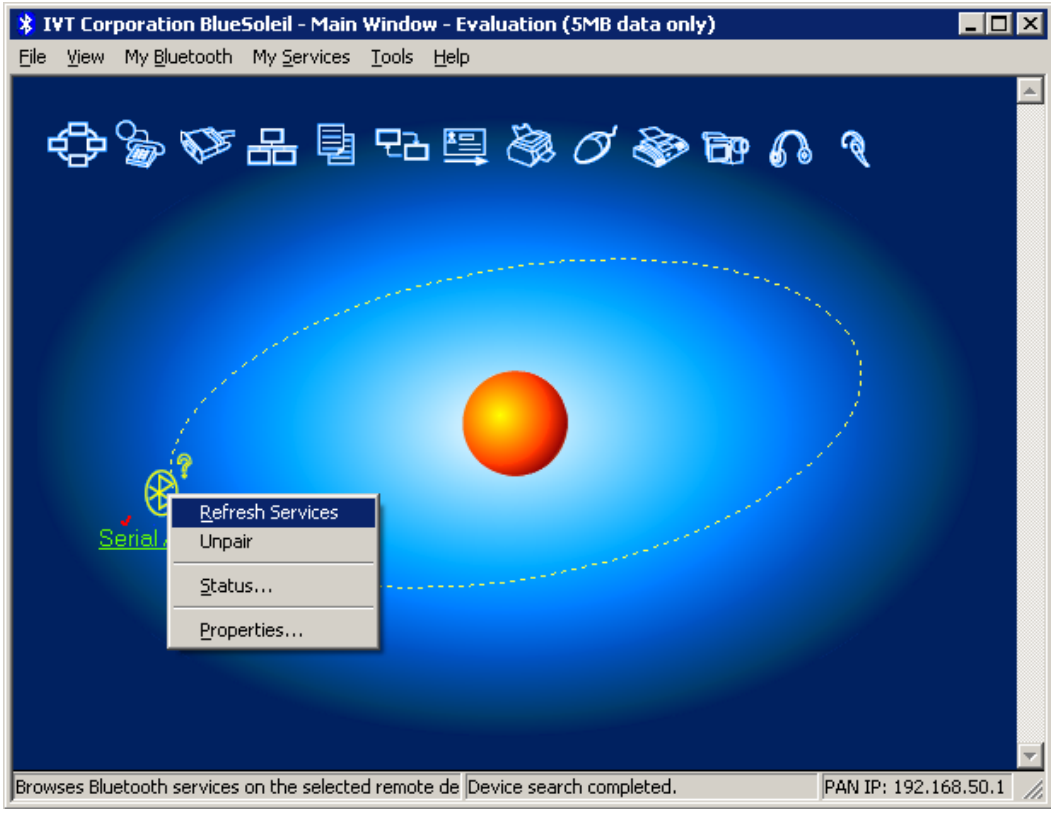
8. Enter the default Pin code which is ‘1234’


Enter Bluetooth Passkey
A remote device needs a Bluetooth Passkey to create Paired relationship for future connections. Please use the same passkey on this device and on the remote device:
OK
Cancel
Remote Device: Serial Adaptor
Address 00:12:6F:09:96:ED
Passkey: ****
Time Left: 23 s

9. Right-click on the Serial Adapter icon and click “Refresh”


IVT Corporation BlueSoleil - Main Window - Evaluation (5MB data only)
File View My Bluetooth My Services Tools Help
Refresh Services
Unpair
Status...
Properties...
Browses Bluetooth services on the selected remote de
Device search completed.
PAN IP: 192.168.50.1

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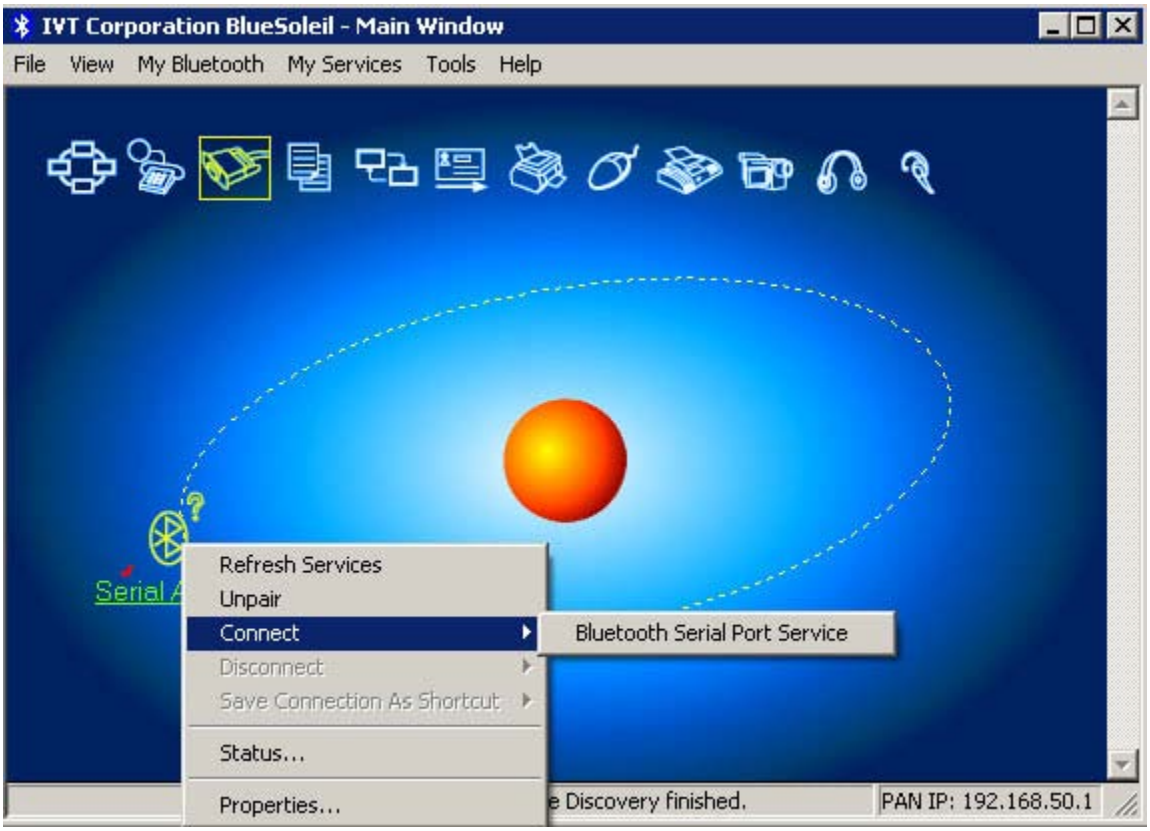
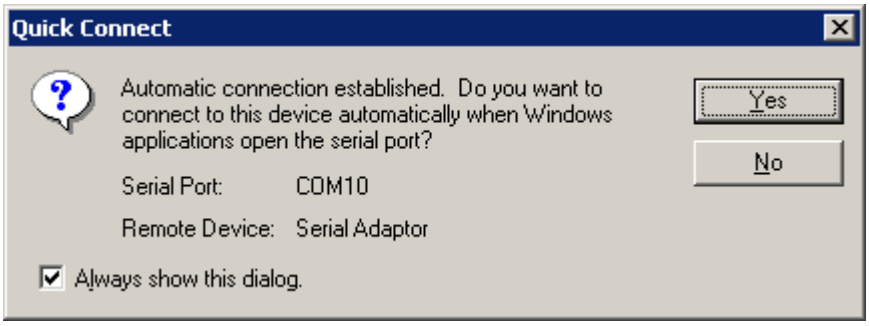
10. Right-click again on the Serial Adapter icon and this time point the cursor on “Connect” and click “Bluetooth Serial Port Service” to connect the UCBT232B/EXA with your computer.



11. If you want Windows to automatically connect to the UCBT232B/EXA click Yes otherwise click No.


Quick Connect
Automatic connection established. Do you want to connect to this device automatically when Windows applications open the serial port?
Yes
No
Serial Port: COM10
Remote Device: Serial Adaptor
Always show this dialog.

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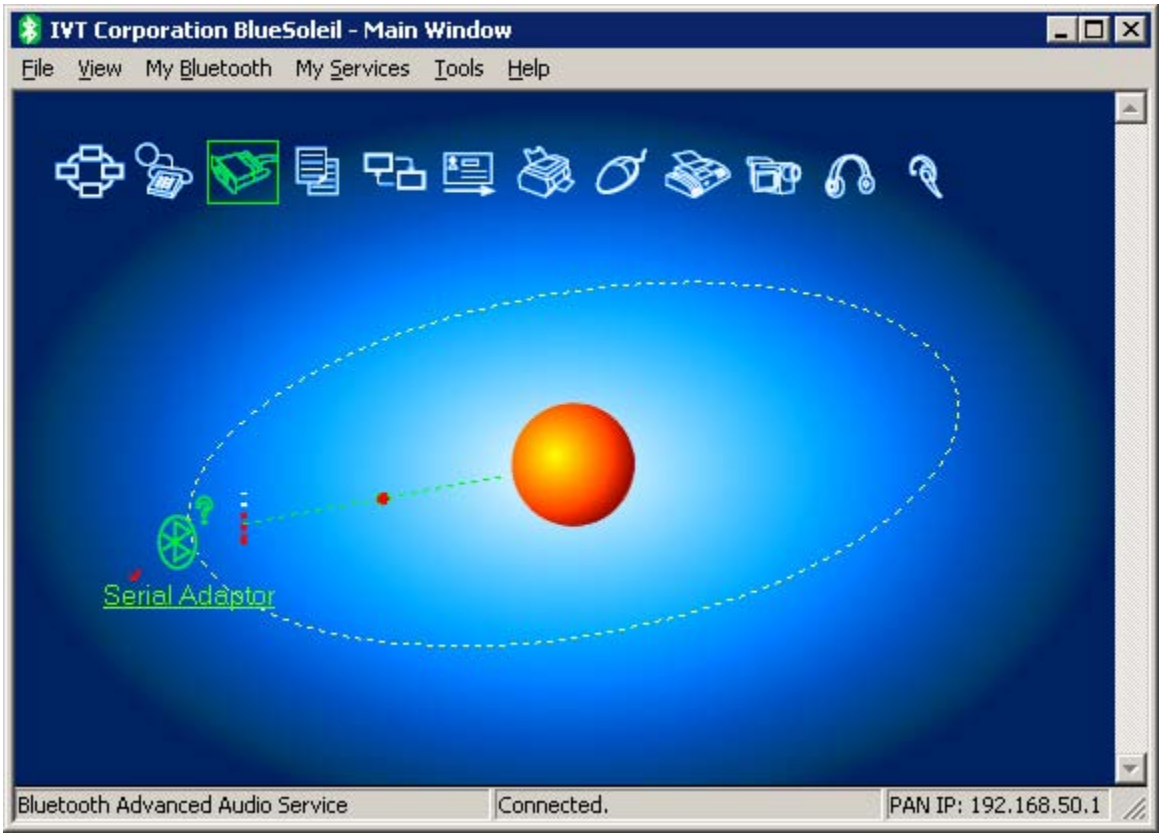
12. The UCBT232B/EXA is now paired and connected to your computer. When its successfully connected the blue LED light on the UCBT232B/EXA should be steady blue; and in BlueSoleil a green dotted line with a red arrow going from the serial adapter icon towards the orange circle should be visible.


IVT Corporation BlueSoleil - Main Window
File View My Bluetooth My Services Tools Help
Serial Adaptor
Bluetooth Advanced Audio Service
Connected.
PAN IP: 192.168.50.1

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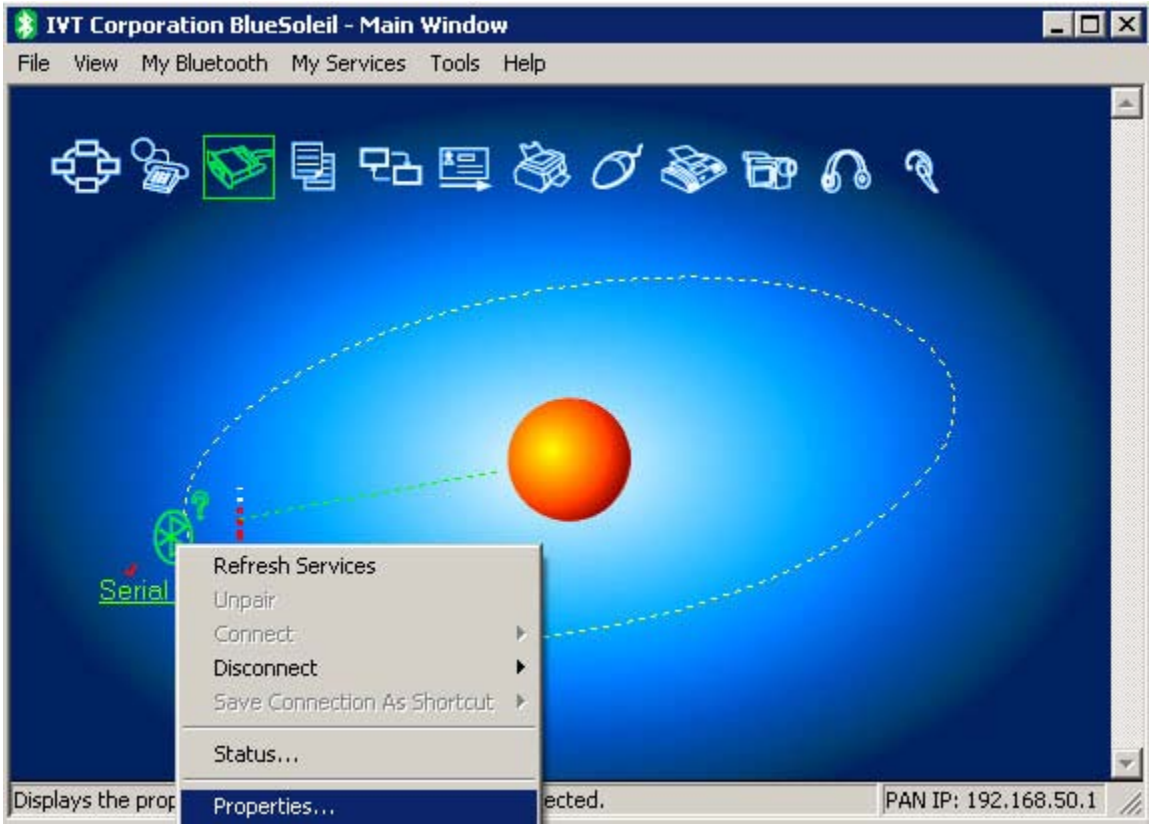
13. To see the COM port number, status and signal strength, right-click on the Serial Adapter icon and click ‘Status’



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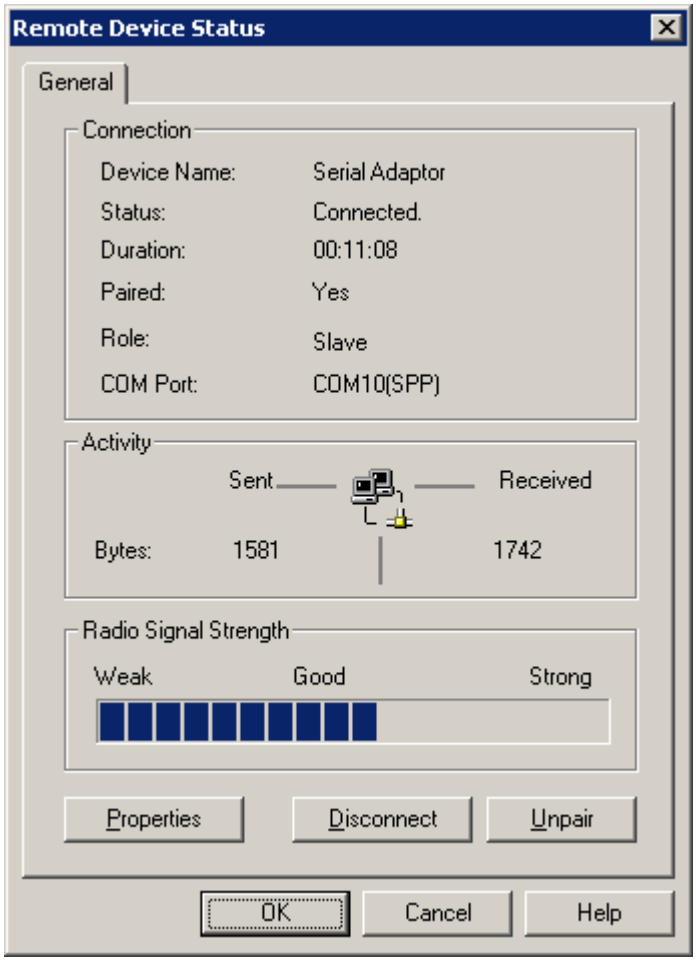
14. Status screen



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Pairing with another Serial Bluetooth Adapter

If you do not have a built-in or external Bluetooth dongle you can instead use two serial Bluetooth adapters to setup a link as illustrated in below illustration. This is a more direct form of cable replacement since you do not need Bluesoleil or any other software to establish a communication link.

First you will need to configure the two units as a slave and a master. To do this you can use Tera Term or HyperTerminal.

1. Connect one serial Bluetooth adapter to your computer, this will be assigned the master unit. If your computer does not have a serial port then you can connect the serial Bluetooth adapter via a USB to serial adapter. If using a USB serial adapter make sure that the COM port has been successfully created (check in Device Manager) before continuing. Please see our “USB to Serial Setup Guide” for information on how to successfully setup a USB serial Adapter. We recommend using a Premium USB to Serial adapter (with FTDI processor chip), Prolific chips will in some cases not work. Notice the COM port number, you will need it later.

Notice: The parameters of the UCBT232B/EXA can be configured through the serial COM interface or over Bluetooth.

RESTART YOUR COMPUTER WITH THE USB TO SERIAL ADAPTER CONNECTED TO YOUR COMPUTER AFTER INSTALLING THE DRIVERS. Otherwise you might experience problems with Tera Term communication.

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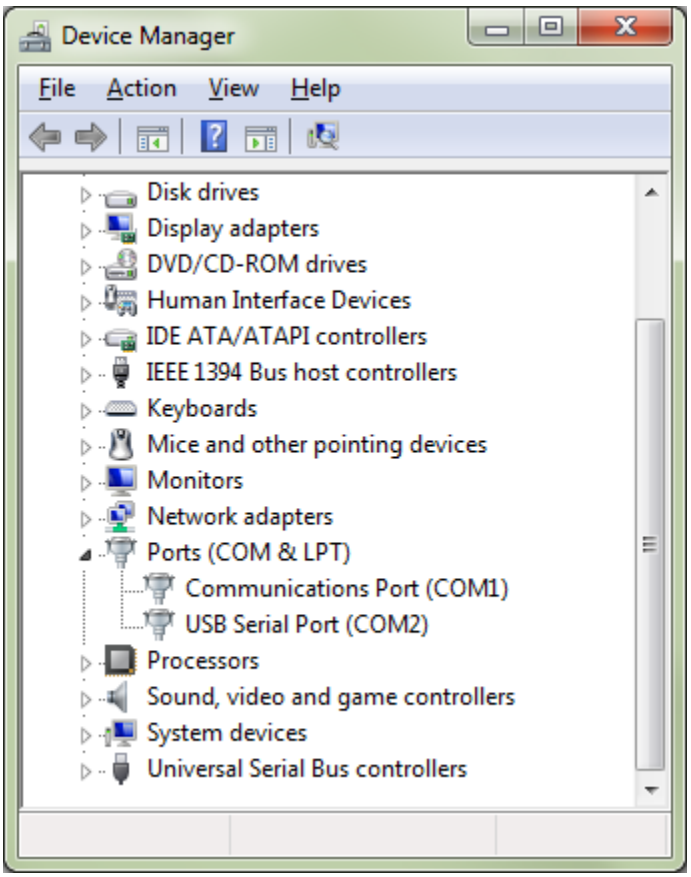

In this example the COM port created by the USB serial adapter is COM2 and the computer's built-in COM port is COM 1.

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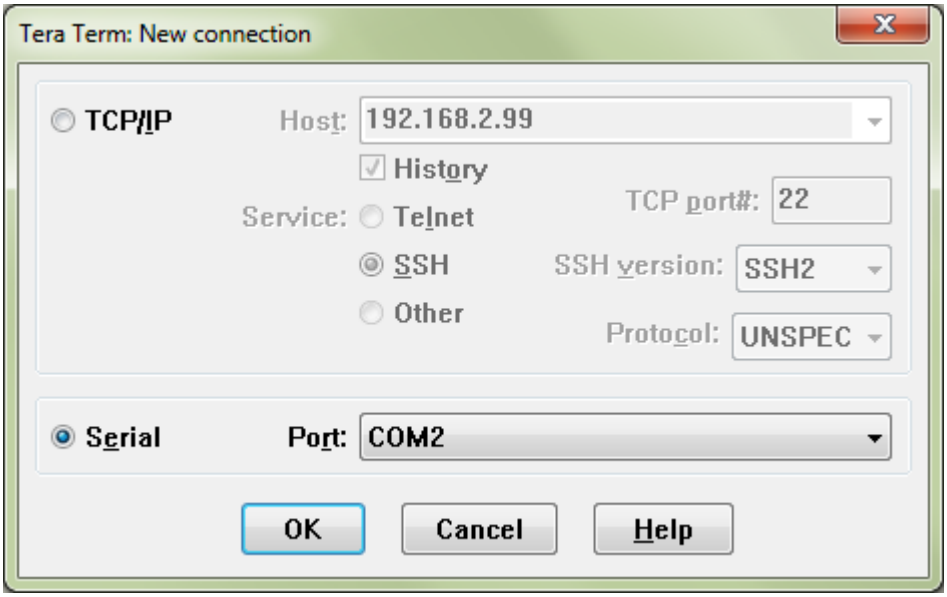
Now you need to configure one adapter as Master and one as Slave so that they can be paired and communicate with each other. We use Tera Term for configuring the adapter's parameters.

2. Download Tera Term from www.usconverters.com.

3. Install and start Tera Term. At the startup screen choose the virtual COM port number which the USB adapter has created.



4. Click OK.
   Note: make sure Tera Term's port is set to 9600 baud which is the Bluetooth adapter's default setting, (adapter serial number 14090200 and lower has 19200 baud as default).

5. If there is a Flow switch on your Serial Bluetooth adapter it should be in position DCE (towards the DB9 connector on the UCBT232B/EXA). You are now ready to send commands to the UCBT232B/EXA. If you for example enter the command AT you should get an 'OK' back from the UCBT232B/EXA.

Example: Entering the command VERSION=? gives you the UCBT232B/EXA's version number.

To be able to setup a link between the two serial Bluetooth adapters, one unit has to be configured as a Master and the other has to be configured as a Slave (Slave this is the default setting).
To change the adapter from Slave mode (default mode) to Master mode enter the following command:

ROLE=M

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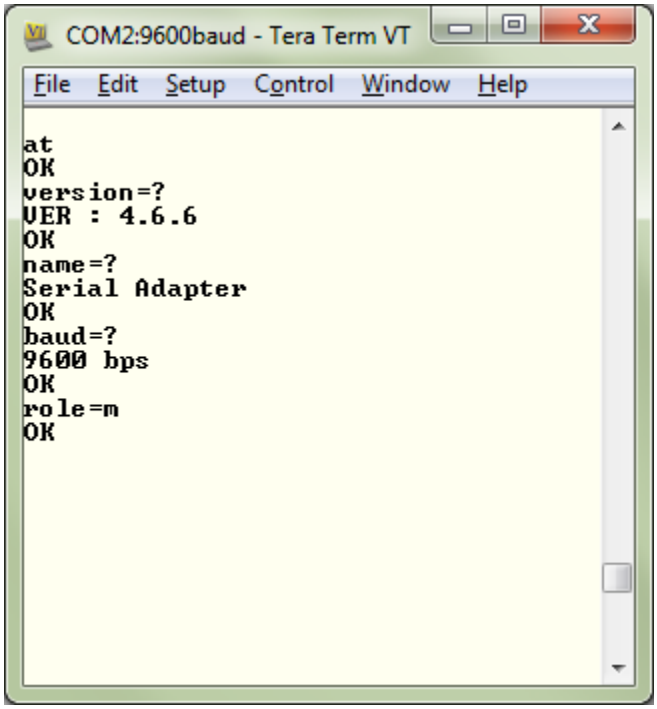
This will put the adapter in Master mode, (for a list of all commands please refer to the serial Bluetooth adapters user's manual).



When the Serial Bluetooth Adapter is in Master mode the blue LED light will flash at a rate of approximately 0.9 sec. This means that the adapter is inquiring and searching for other serial Bluetooth adapters in the area.

To be able to auto-pair the two serial Bluetooth adapters you will also have to configure the MASTER adapter to auto-connect; you do that by sending the AUTO=Y command to the adapter in Tera Term. This command only applies to the Master adapter, not the slave.

You can now connect the other serial Bluetooth adapter (the slave) to the power supply and turn it on. The factory default for the serial Bluetooth adapters is Slave mode, so you do not need to configure the second adapter.

If configured correctly the Master adapter will within 5 seconds automatically find and connect to the Slave adapter and the blue LED light will be steady ON. The wireless communication link is now established.

To test if you successfully can send and receive data through the link you can make a loop-back test as described later in this guide.

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Enabling the DIP switches

If you want to use the DIP switches on top of the adapter then you need to first enable these. You do that by sending the command DIP=Y in Tera Term; this will enable the two DIP switches. The DIP switches can be a convenient way of switching between Master and Slave mode.

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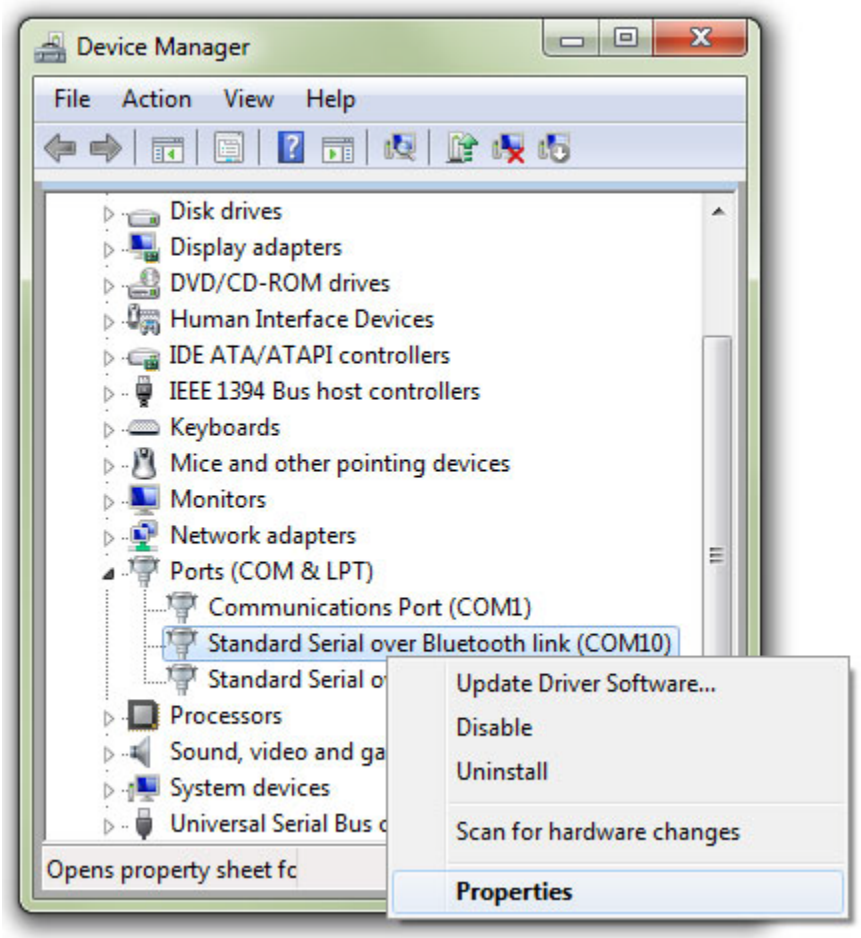
Changing the COM port number

If you need to change the COM port number the UCBT232B/EXA is using, this can be done as following:

Go to Windows Device Manager, right-click on the COM port which Bluesoleil (or your built-in or USB Bluetooth dongle) has created, in this case COM 10 and select “Properties”.

If there are multiple COM ports listed in Device Manager you can determine which port to click by right-clicking the Serial Adapter icon in BlueSoleil and click ‘Status’, as described in section 1 of this guide; or if you are using Windows 7’s built-in Bluetooth drivers you can go to Windows Bluetooth Settings and confirm which port is the outgoing COM port.



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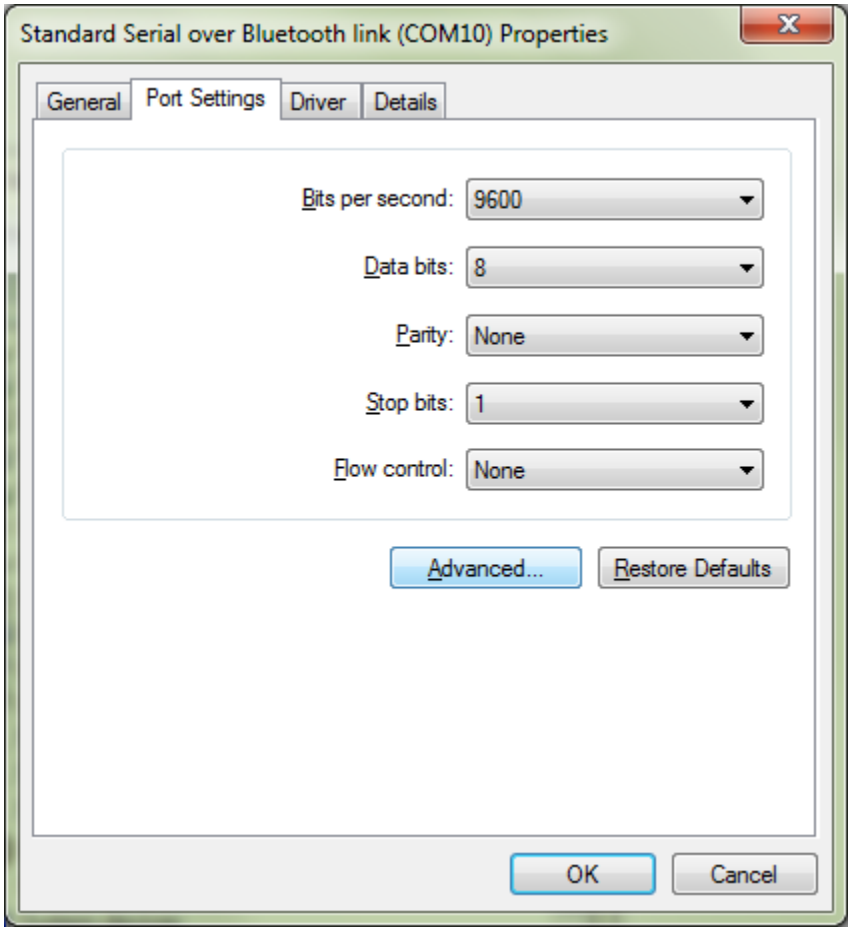
Under the ‘Port Settings” tab click the “Advanced” button



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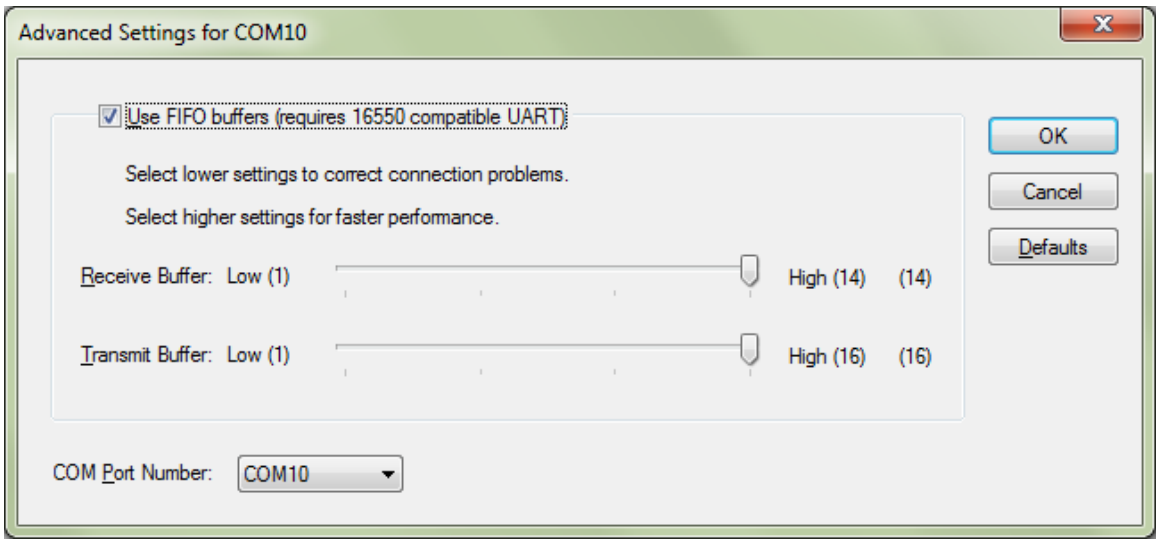
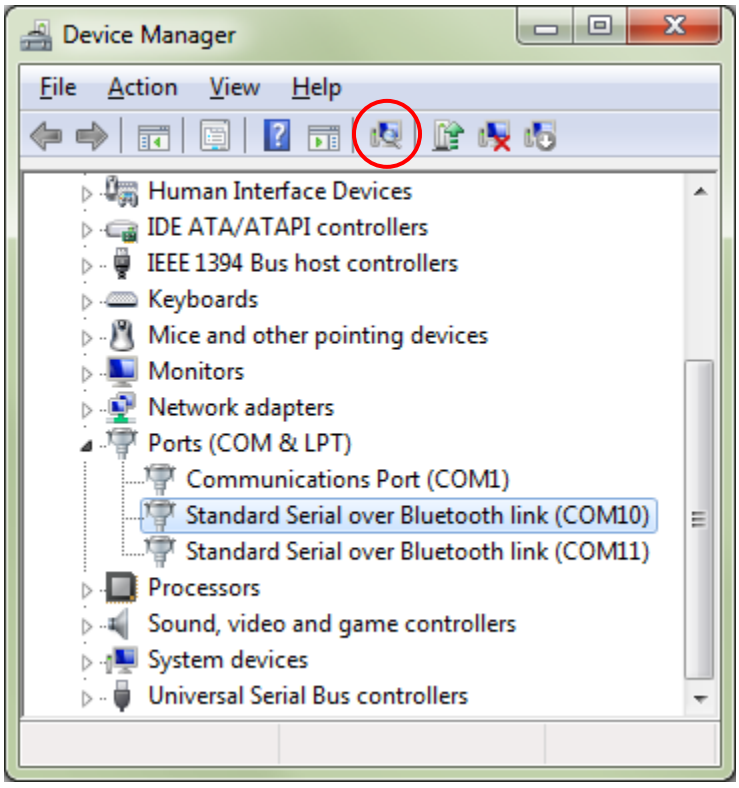
You will here be able to change the COM port number


Advanced Settings for COM10
Use FIFO buffers (requires 16550 compatible UART)
Select lower settings to correct connection problems.
Select higher settings for faster performance.
Receive Buffer: Low (1) High (14) (14)
Transmit Buffer: Low (1) High (16) (16)
OK
Cancel
Defaults
COM Port Number: COM10

After you have changed the COM port number click Ok. In Windows Device Manager you may need to click the “Scan for Hardware changes” icon to have the changes show up:



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Making a loop-back test

To verify that the UCBT232B/EXA is properly working, paired and connected you can make a loop-back test. In this test you will check if you can send data from your computer out through your computer's Bluetooth (which actually is a virtual serial COM port) to the TX (transmit) wire on the UCBT232B/EXA (pin 2), loop it back (by the help of a paper clip) and then receive it back on the RX (receive) wire of the UCBT232B/EXA, and finally receive it back on your computer.

To make the loop-back test you will need to setup and pair the UCBT232B/EXA with either your computer's build-in Bluetooth or a USB Bluetooth dongle as shown in the image below:

Please carefully follow the steps starting on page 2 of this guide to setup and link the UCBT232B/EXA with your computer. In order to successfully perform the loop-back test the UCBT232B/EXA MUST be properly linked with your computer.

1. Download the software AccessPort from www.usconverters.com.

2. Start AccessPort.

3. Click Tools > Configuration and enter the parameters of the UCBT232B/EXA at the COM port which it has created, in this case COM 10.

   To check which COM port number you need to enter in AccessPort see page 14 in this guide. It is important you enter the correct COM port number otherwise you will not be able to communicate with the UCBT232B/EXA.

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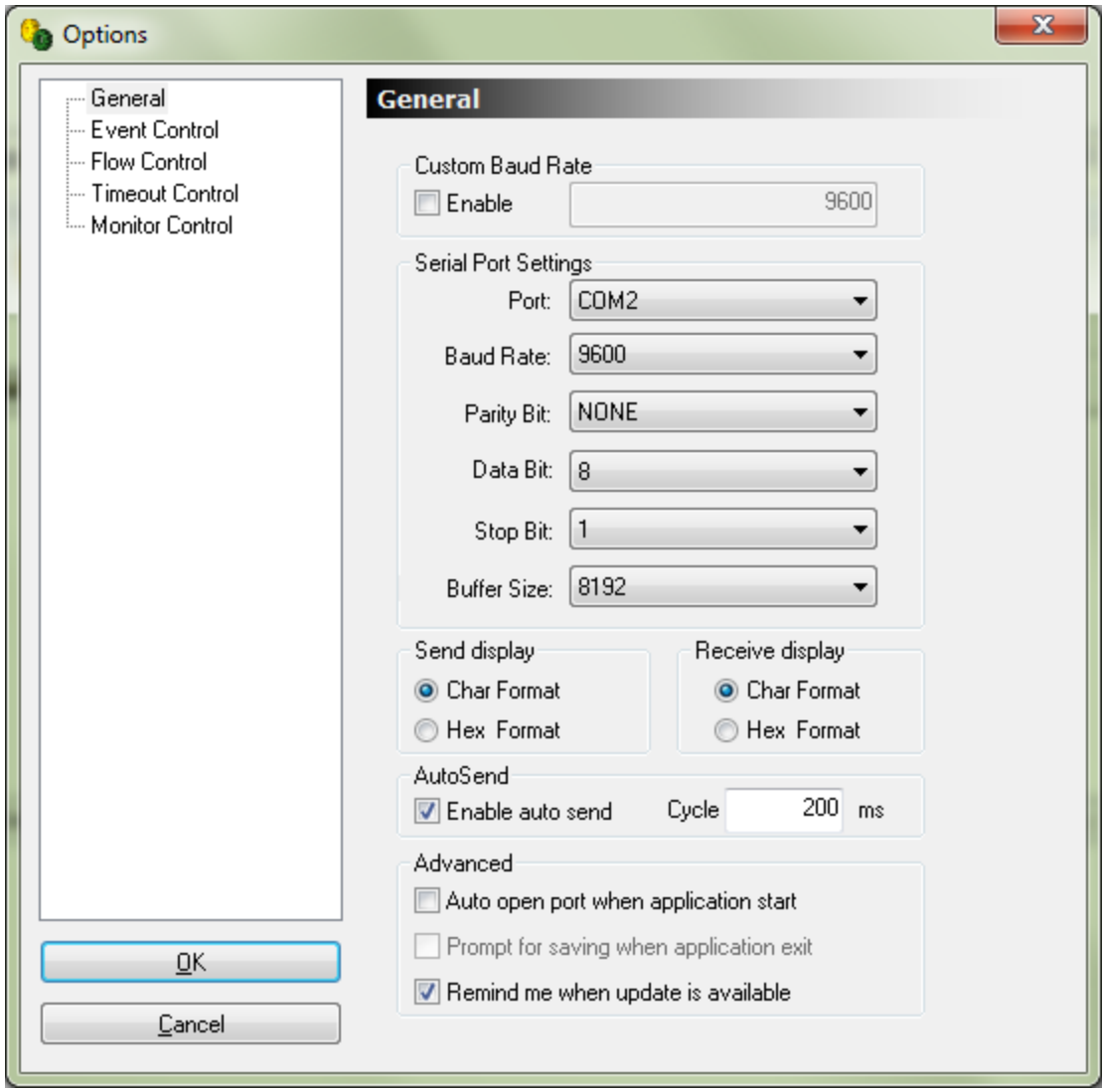

Notice: adapter serial number 14090200 and lower has 19200 baud as default.

4. Loop-back the TX and RX signals. To do this you can simply use a paperclip by connecting it from pin 2 to pin 3 on the UCBT232B/EXA's DB9 connector:

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The UCBT232B/EXA obviously cannot and should not be connected to your serial device when you do this test. It only needs to have the loop-back paper clip and power connected and turned ON.

5. In AccessPort open COM 10 by clicking Tools > Port Switch. Make sure the COM port is properly opened.
If AccessPort cannot open the port this is an indication that the UCBT232B/EXA in not properly connected, it has a defect or the port for some other reason has not successfully been created, perhaps you entered the wrong COM port number in AccssPort Configurations.
Enter a text string in the lower window and click send. With the UCBT232B/EXA properly connected and linked you should now be able to receive the same characters in the upper window which you send in the lower window.

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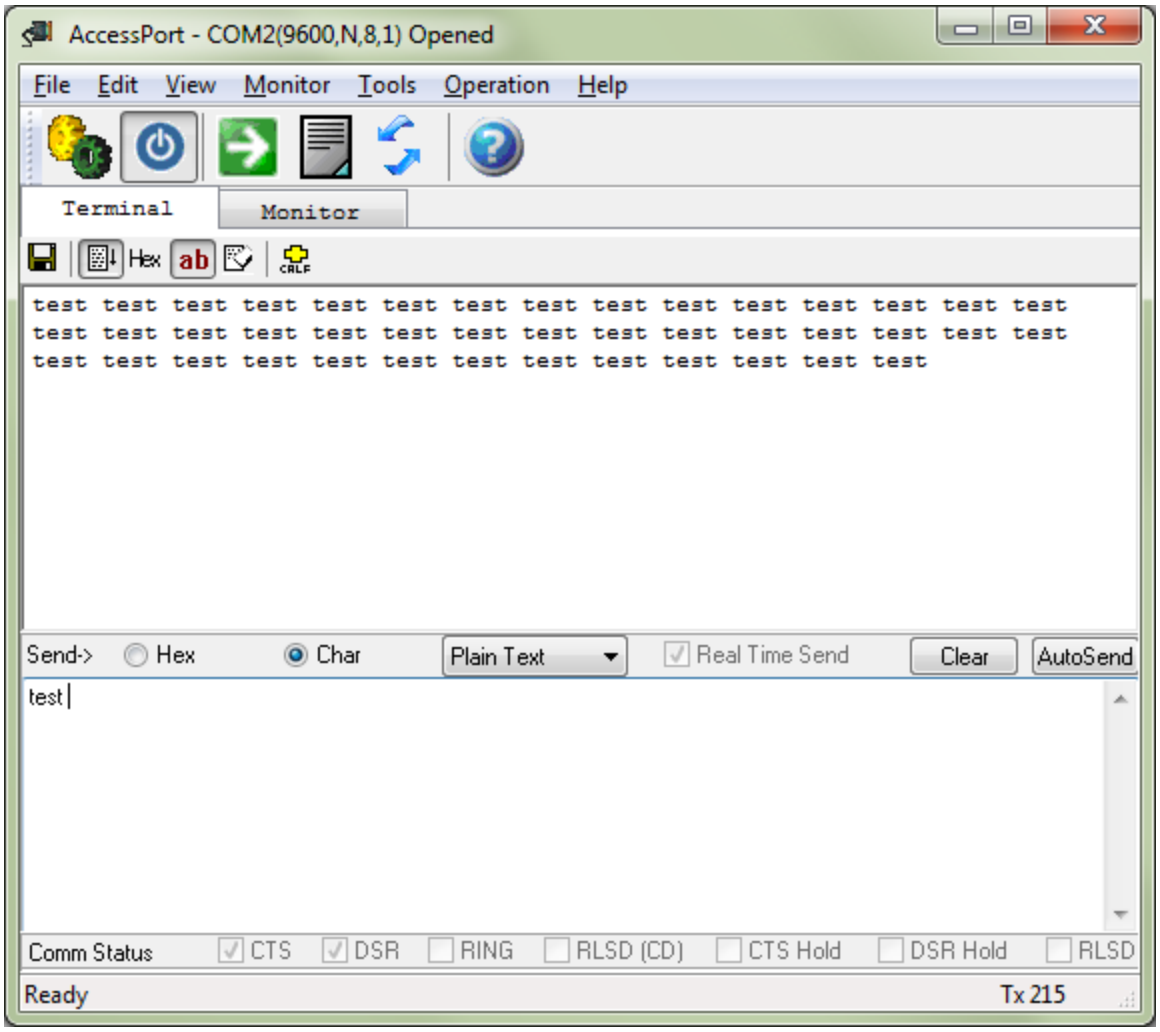
AccessPort - COM2(9600,N,8,1) Opened
File Edit View Monitor Tools Operation Help
Terminal
Monitor
Hex
ab
CRLF
test test test test test test test test test test test test test test test
test test test test test test test test test test test test test test test
test test test test test test test test test test test test test
Send-> Hex Char Plain Text Real Time Send Clear AutoSend
test
Comm Status CTS DSR RING RLSD (CD) CTS Hold DSR Hold RLSD
Ready
Tx 215

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Configuring the parameters

Configuring the UCBT232B/EXA with your own custom settings such a baud rate, data settings, flow control etc. Please refer to the Serial Adapter's datasheet for all available parameters.

The adapter's parameters can be configured by one of the following ways:

1. Through the serial RS232 interface
2. Over Bluetooth

Configuring the parameters through the serial interface

Configuring the parameters through the serial interface is the easiest way.
If you do not have a built-in serial COM port available in your computer we recommend using our Pro USB to Serial adapter model XS880 (with FTDI processor chip), which is fully compatible with the adapter. We cannot guarantee compatibility with other adapters.

1. Connect the UCBT232B/EXA to your computer either directly to a COM port, or if you computer does not have a COM port use a USB to Serial RS232 adapter.

2. If you are using a USB to Serial adapter first install the required drivers for the adapter and make sure that a virtual COM port has been successfully created.

3. Connect the UCBT232B/EXA to the power supply and connect the UCBT232B/EXA's COM port to the USB serial adapter (or your computer's COM port).

4. If you are using a USB serial adapter check in Windows Device Manager which COM port has been assigned to your adapter, in this case COM port 5.

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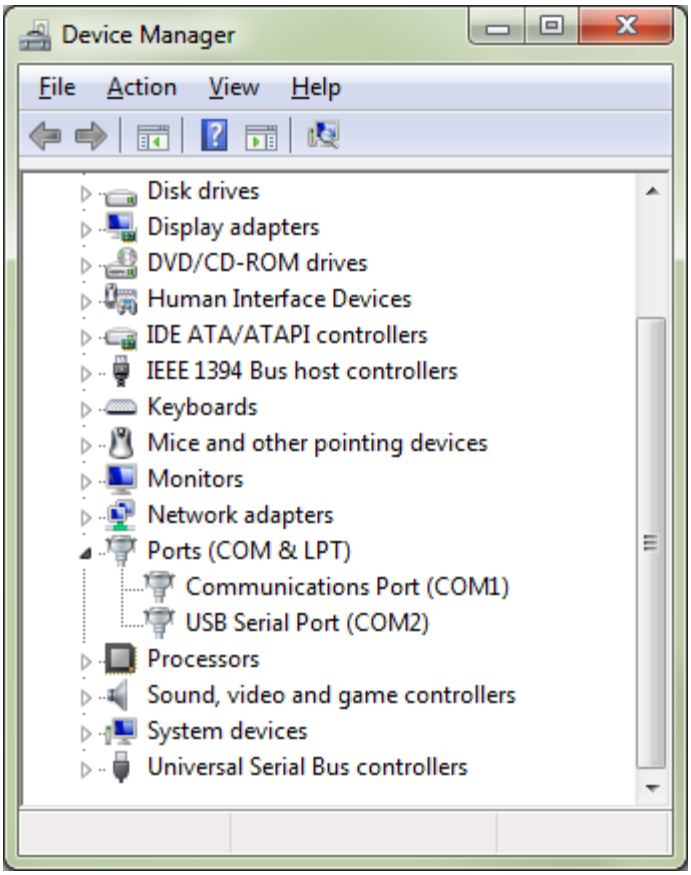

RESTART YOUR COMPUTER WITH THE USB TO SERIAL ADAPTER CONNECTED TO YOUR COMPUTER AFTER INSTALLING THE DRIVERS. Otherwise you might experience problems with Tera Term communication.

5. Download Tera Term from www.usconverters.com, we do not recommend using HyperTerminal.

6. Install and start Tera Term. At the startup screen choose the virtual COM port number which the USB adapter has created.

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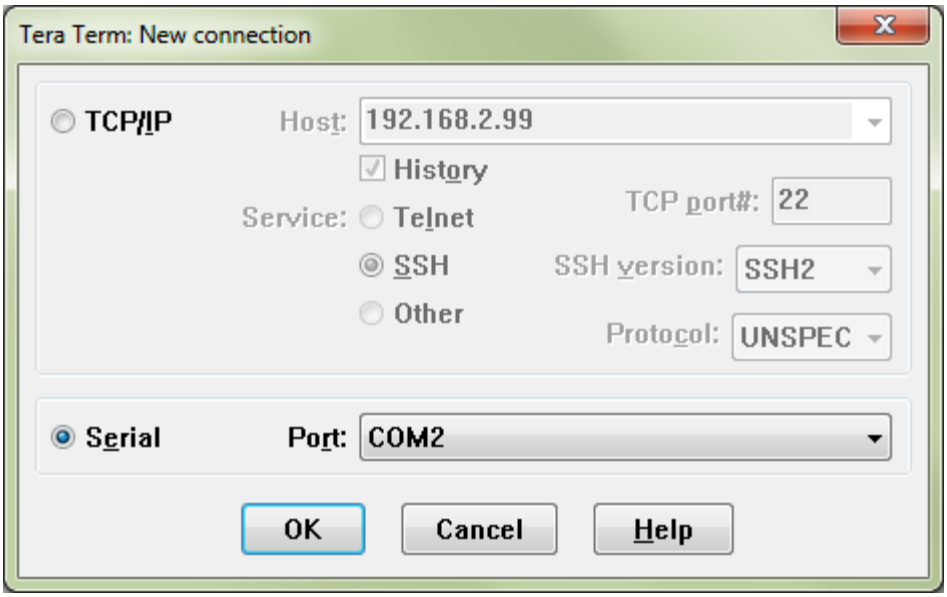

Notice: if your adapter has serial number 14090200 or lower the default baud rate is 19200 baud.

7. Click OK. If there is a Flow switch on your Serial Bluetooth adapter it should be in position DCE (towards the DB9 connector on the UCBT232B/EXA). You are now ready to send commands to the UCBT232B/EXA. If you enter the command AT you should get an 'OK' back from the UCBT232B/EXA.

   Example: Entering the command VERSION=? gives you the UCBT232B/EXA's version number.

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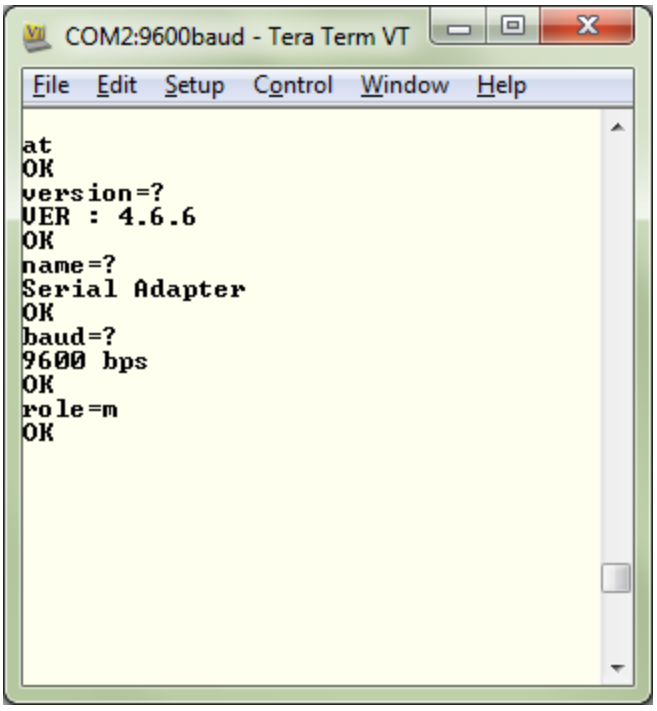

Keep in mind: that if you change the baud rate of the UCBT232B/EXA to for example 1200 baud then you will no longer be able to communicate with the UCBT232B/EXA through Tera Term until you also change the baud rate in Tera Term to 1200.

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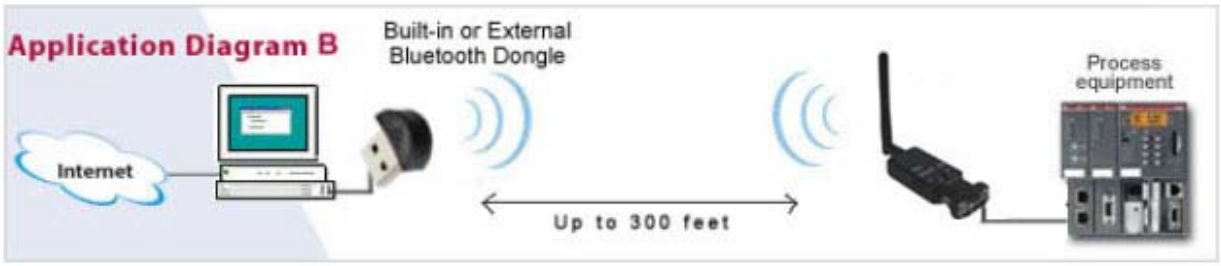
Configuring the parameters over Bluetooth

Setting the Data Mode and Command Mode using <<< and >>>

First pair and connect two adapters referring to the procedure described earlier in this guide,

or connect the adapter via built-in Bluetooth or an external USB Bluetooth dongle.



You can use Windows 7's built-in Bluetooth management software for pairing the adapter with your computer. Please see the section called:

"Pairing with built-in Bluetooth or external USB Bluetooth dongle using Windows default Bluetooth management software (for Windows Vista, 7, 8)"

in this guide for how to pair the serial Bluetooth adapter with your computer using Windows built-in Bluetooth management software.

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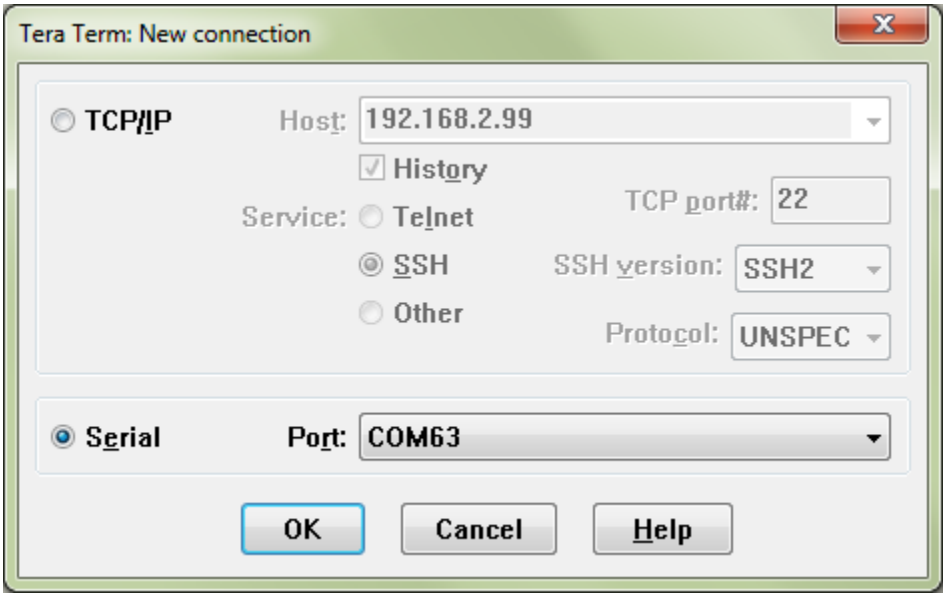
Before the connection is made the blue LED light on the adapter should flash which means that the adapter is NOT connected.

Open Tera Term and open the COM port with the settings shown below, however change the COM port number to the COM port number your system has created.

NOTICE: IF YOU ARE USING A BUILT-IN OR USB BLUETOOTH DONGLE THEN THIS COM PORT NUMBER IS THE COM PORT CREATED BY THE BLUETOOTH DRIVERS, IT IS NOT THE ADAPTER'S COM PORT. PLEASE SEE THE SECTION CALLED "Pairing with built-in Bluetooth or external USB Bluetooth dongle using Windows default Bluetooth management software (for Windows Vista, 7, 8)" FOR HOW TO DETERMINE WHAT THE BLUETOOTH CREATED COM PORT NUMBER IS.



Click the OK button and the adapter will open the COM port. The blue LED light on the adapter should be steady ON.

Now hold down the Shift key on your keyboard and pres the > key 3 times in a row with less than 500ms between the presses. You should now receive an "OK" message back from the adapter, indicating that it is in command/configuration mode. It may take a few tries to get the "OK" to appear since the timing of the three > signs have to be correct.

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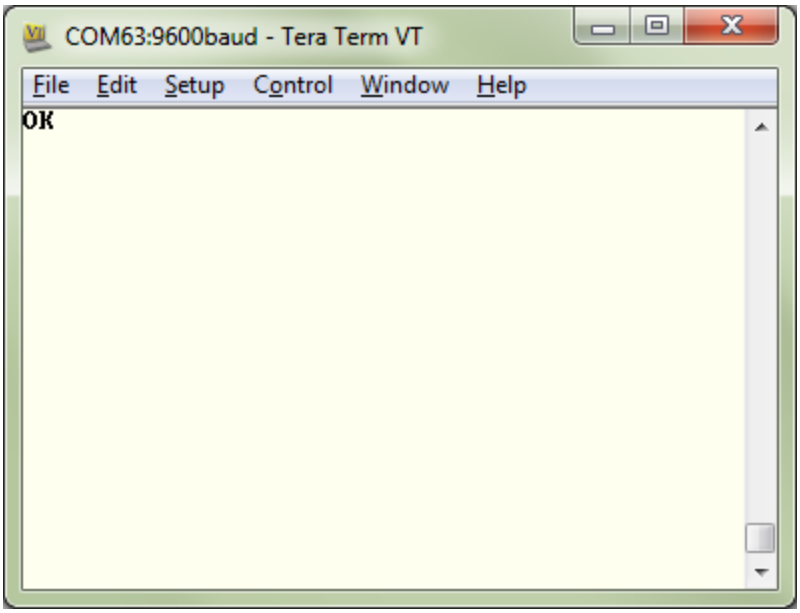
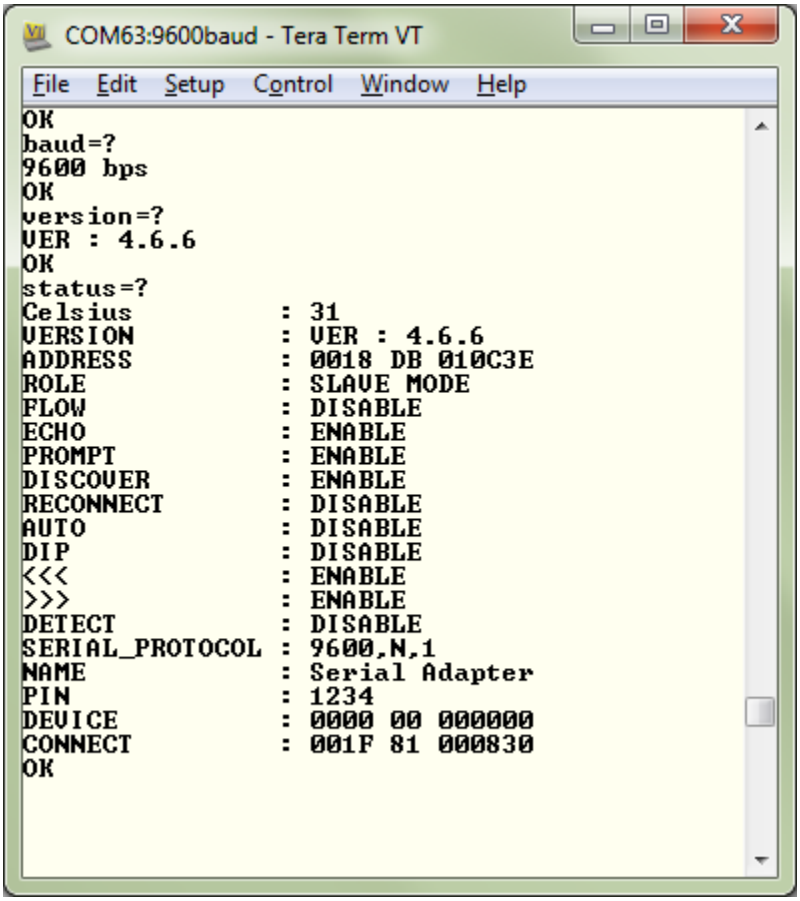


You can now enter any AT command which will be sent to the serial adapter over Bluetooth. For example enter baud=? And you will get the current baud rate back from the adapter.



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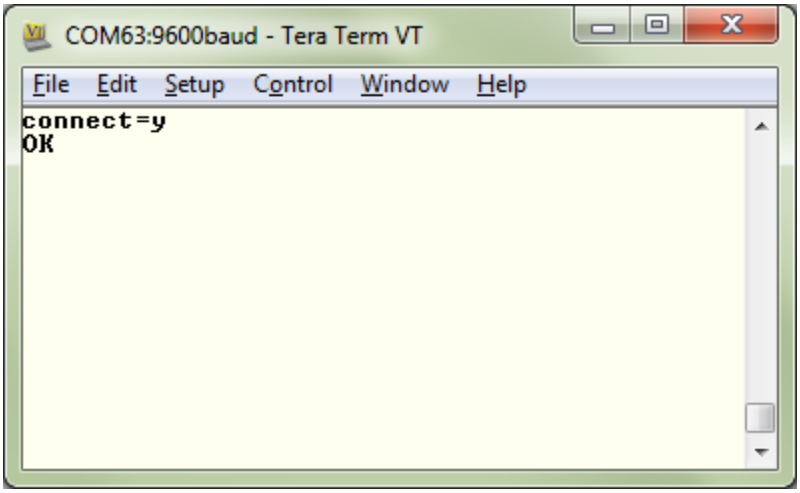
To get the adapter back to Data Mode you can enter the command: connect=y



Resetting the serial Bluetooth adapter

To reset the adapter to factory settings simply press and hold the reset button located on the top of the adapter. Use a paper clip and carefully press AND HOLD the micro button through the hole in the housing for approx 2 – 5 seconds. The adapter will then reset and restart.

Resetting the adapter by pressing the reset button will erase all settings you have entered and reset them to factory default settings.

Removing the power supply to the adapter will however NOT erase your entered settings.

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Questions & Answers

Q: I cannot communicate with my UCBT232B/EXA, why?

A: Here are several things you can try:

1. Try and swap the TX and RX wires between the UCBT232B/EXA and the remote device it is connected to by using a null modem adapter. This is required if the serial device you are connecting to is configured as a DTE device.

2. If you are using a null modem cable to connect your computer to the remote device then the switch on the UCBT232B/EXA connected to your computer must be in the position towards the DB9 connector. The UCBT232B/EXA connected to your remote device must also be in the position towards the DB9 connector.

3. If you are using a straight through cable to connect your computer to the remote device then the switch on the UCBT232B/EXA connected to the computer must be toward the DB9 connector. The switch on the UCBT232B/EXA connected to the remote device must be towards the antenna.

4. Reset the adapter(s) to factory settings by pressing the reset button and start over.

5. Disable the Echo and status messages. This can be done with the ECHO=N and PROMPT=N commands.

6. Disable flow control on both UCBT232B/EXA's (FLOW=N)

7. Loop-back RTS to CTS (Pin 7 to Pin 8) on the remote connector if possible.

8. Your device may need a DSR/DTR signal. Some devices require a signal on both CTS and DSR. The UCBT232B/EXA simply loop-back DTR to DSR. If your device requires a DSR signal but does not provide a DTR signal then the DSR signal will be missing. Looping-back the wires as shown below will solve this problem. Generally hardware flow control should be disabled on the UCBT232B/EXA when this loop-back is used.

Adapter Side	Equipment Side
Pin 2 (RxD)	Pin2 (RxD)
Pin 3 (RxD)	Pin3 (RxD)
Pin5 (GND)	Pin5 (GND)
Pin7 (RTS)	Pin4 (DTR) Pin7 (RTS)
Pin8 (CTS)	Pin6 (DSR) Pin8 (CTS)

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Q: When entering the command ATF? it returns an error when trying to search for Bluetooth devices in range.

A: In order to have the UCBT232B/EXA display Bluetooth devices in range it must be in Master mode, and must not be in auto-connect mode.

Q: How do I configure the UCBT232B/EXA for 7 data bits, 1 stop bit and even parity?

A: The adapter itself cannot be set to 7 data bits however by setting the parity bit of your **software (local computer side) and serial device (remote adapter side)** to either **SPACE, NONE or MARK** the adapter can emulate 7-bit communication while its actually set to 8 bit communication. This will work with most devices, however possibly not all.
This has been tested and confirmed working both with a paired “USB Bluetooth dongle to serial Bluetooth adapter” setup and a paired “serial Bluetooth adapter to serial Bluetooth adapter” setup.
Alternatively, if your serial device and/or control software is set to 7 bits (and cannot be set to 8 bits which the adapter is using), you may be able to set your serial device and/or control software to 8 bits and the parity bit to EVEN, which in will simulate 8 bits. This solution will work with many serial devices.

Please see example setup below:

Depending on your serial device you need to set the parity bit of your **control software and/or serial device** (**not the adapter**) to either Space, None or Mark, you will need to simply try all 3 to find out which works best with your particular serial device.

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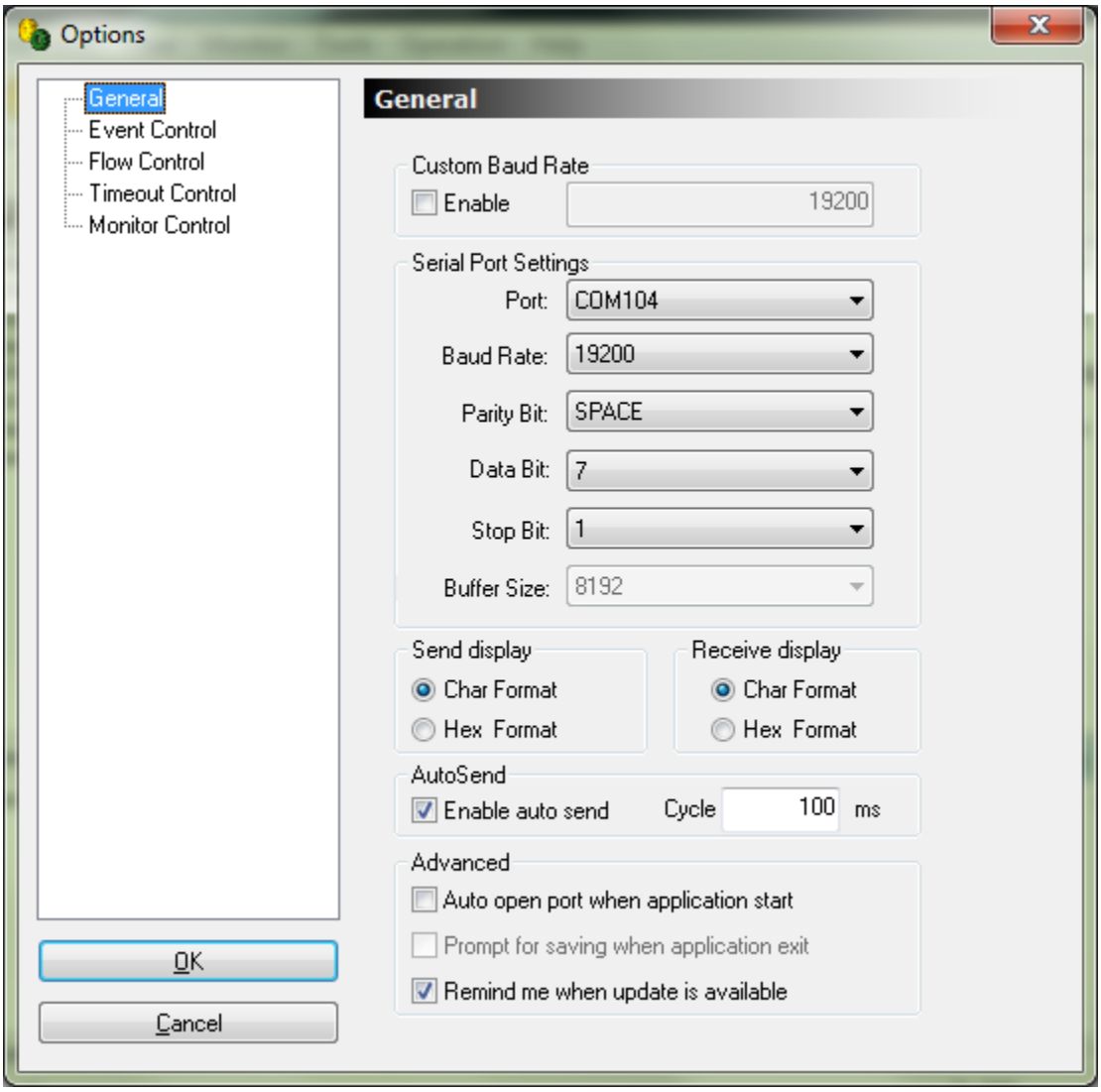
Example settings when using AccessPort terminal software with 7 bit communication at the computer side:



Q: How is DTR/DSR signals (pins 4 & 6) handled by the UCBT232B/EXA?

A: The DTR signal is rarely used in most serial devices and even if it is used it is often not actually required by the application. This is why the UCBT232B/EXA has looped back the DTR / DSR signal, pin 4 looped to pin 6. By doing this, if the device asserts DTR indicating it will read an asserting DSR. For devices that require an asserting DSR but are not asserting DTR the DSR signal (pin 6) can be shorted to RTS (pin 7).

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Q: How can I keep the COM port open at all times? I have created a link using a USB Bluetooth dongle and a UCBT232B and it appears as the COM port does not open until my application software tries to connect to my serial device.

A: When creating a link with a USB Bluetooth dongle or built-in Bluetooth the UCBT232B/EXA will be the Slave and the USB Bluetooth dongle (or built-in Bluetooth) in the PC will be the Master. The Master or the application at the Master will control the Slave. This is cannot be changed since this is how the Bluetooth SPP works.
To keep a port open at all times you can instead create a link using two UCBT232B/EXA's, this will create a Master and a Slave UCBT232B/EXA which will work independent from the PC thereby keeping the port open at all times.

Q: I found that the UCBT232B/EXA generates a connect and disconnect string upon changes in Bluetooth state as following: CONNECT : C485 08 177441 DISCONNECT : C485 08 177441. This string causes my serial device (a telescope) to enter into a bad state which requires a power cycle to recover from. Would it be possible to avoid generating the character string?

A: Yes, please refer to the 'PROMPT=N' command. This parameter is by default set to "Y", if you change it to "N" then the character strings will no longer be present and no longer cause problems with your serial device.

Q: Does the UCBT232B/EXA work with iPhone/iPad/iPods?

A: The iPhone/iPad/iPods does not support the SPP (Serial Port Profile) so currently the UCBT232B/EXA does not work with iPhone/iPad/iPods.

Update December 2012: We are working on a new version of the UCBT232B/EXA which will be compatible with iOS for iPhone/iPad/iPods, unfortunately we currently do not have a release date.

Bluetooth V4.0 has support for newer versions of smart phones with iOS. Older versions of iOS is not compatible with Bluetooth V4.0.

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Known issues

When using the UCBT232B/EXA with SkySafari telescope software the “Echo” and system status messages must be disabled for proper communication. These can be disabled with the commands:

ECHO=N
PROMPT=N

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